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ABSTRACT

Reported is a study regarding the feasibility of using risk-taking attitudes as a basis for programs to control and predict drug abuse. Attitudes toward a number of common behaviors including drug use, sex, theft, etc., were obtained from over 650 subjects from junior high school level through adults. Reported frequencies of actual behaviors were acquired. The attitudes and frequencies of behavior were analyzed separately and then compared to each other. In general, behaviors rated as having high risks were also rated as having low gain and vice versa. Multiple regression equations were drived to predict frequency of behavior from attitude ratings. It was concluded that it should be possible to (a) use attitude ratings to predict which individuals or groups are highly prone to drug use "before" drug use starts, and (b) evaluate the effects of action programs by noting changes in attitude ratings. The low gain value of socially undesirable behaviors can be taught where it can realistically be shown to be the case. The probable consequences of immediate behavior on future goals should also be emphasized, but the goals used must be ones with which the person presently identifies. This work was prepared under an ESEA Title III contract. [Not available in hardcopy due to marginal legibility of original document.] (BL)

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RiSK TaKiNG
and
DRUG abuse

by RICHARD E. CARNEY, Ph. D.

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for Title III
Coronado Unified School District

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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CORONADO, CALIFORNIA
1970

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A REPORT ON THE FEASIBILITY OF USING RISK-TAKING ATTITUDES AS A BASIS FOR PROGRAMS TO CONTROL AND PREDICT DRUG ABUSE

by

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Charts and Tables
by
Zella W. Cleary

E.S.E.A. Title III Project
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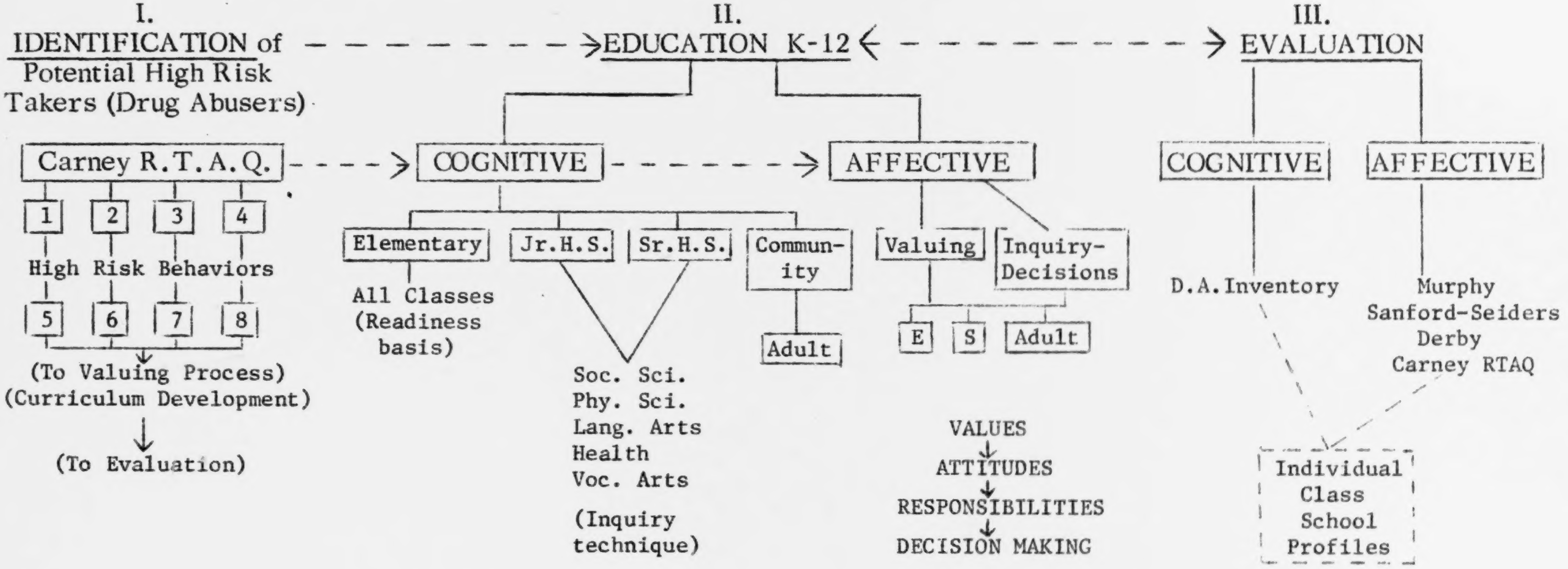
THE CORONADO TITLE III DRUG ABUSE PREVENTION PROGRAM

Kindergarten through Twelfth Grade

THREE-PHASE APPROACH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IDENTIFICATION of Potential High Risk Takers (Drug Abusers)
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5
6
7
8
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(Curriculum Development)
(To Evaluation)
COGNITIVE
Elementary
All Classes
(Readiness basis)
Jr.H.S.
Sr.H.S.
Soc. Sci.
Phy. Sci.
Lang. Arts
Health
Voc. Arts
(Inquiry technique)
Commun-ity
Adult
AFFECTIVE
Valuing
Inquiry-Decisions
E
S
Adult
VALUES
ATTITUDES
RESPONSIBILITIES
DECISION MAKING
COGNITIVE
D.A.Inventory
AFFECTIVE
Murphy
Sanford-Seiders
Derby
Carney RTAQ
Individual
Class
School
Profiles

IN-SERVICE (TEACHER-TRAINING) WORKSHOPS

(a) Drug Education Workshop (information and curriculum development)
(b) Valuing Workshop (UCSD, USIU, SDSC) in District
    (Lasswell, Rucker, Arnspiger, Brodbeck approach)
(c) Resource Teacher Workshop (RNs)
(d) Counsellor Workshop
(e) Parent (community) Workshops

STUDENT CENTERED ATTITUDINAL DEVELOPMENT BASED ON IDENTIFICATION OF "HIGH-RISK" ATTITUDES, COGNITIVE AND VALUING EDUCATION, WITH REGULAR EVALUATION OF RESULTS LEADING TO THE DEVELOPMENT OF RESPONSIBLE AND MATURE ATTITUDES AND BEHAVIOR.

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A Report on the Feasibility of Using Risk-Taking Attitudes as a Basis for Programs to Control and Predict Drug Abuse.

Richard E. Carney, Ph.D.

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California Western Campus

Abstract

Attitudes toward the risk, gain and possibility of control of a number of common behaviors including drug use, sex, theft, etc., were obtained from over 650 subjects. Approximately 200 adults, 200 junior and senior high school pupils and 200 college students participated. Reported frequencies of actual behaviors were also obtained. Means, standard deviations, frequencies, correlations and factors were calculated.

The attitudes and the frequencies of behavior were analyzed separately and then compared to each other. Multiple regression equations were derived to predict frequency of behavior from attitude ratings.

The attitude questionnaires (RTAQ's) gave results that were reliable over the various samples both in terms of the average ratings and the relationships (factors) between the ratings. "Hard" drugs and socially disapproved behavior like abortion and major theft were rated

as having the most risk and least gain. Behaviors such as moving, driving and marriage were rated to have the least risk and most gain. Drinking alcohol, smoking cigarettes and marijuana use tended to have both risks and gains at a moderate level. In general, behaviors rated as having high risks were also rated as having low gain and vice versa.

Actions which stressed personal interaction were rated most effective, and institutional actions, particularly law enforcement, were rated as less effective means for controlling risky behaviors.

Adults tended to see in most behaviors somewhat more risk and substantially more gain for the young than for themselves. Adults also rated most actions as more effective for the young than for themselves. School and college groups tended to see less risk, more gain and less effective possibility of control for risky behaviors than do adults, but teachers and professionals who work with young people also see less risk and effectiveness of control than do other adults.

Several reasonably reliable patterns (factors) of attitudes were found. The most reliable factor grouped illegal drugs, sex behavior and other illegal behavior into an extensive factor which was labled the "Sex-Pot" or F-1 factor. Another factor grouped more socially accepted drugs such as alcohol and tobacco with legal aggressive behaviors such as driving, playing football and protesting. This factor was called the "Masculine-Aggressive"or F-2 factor. Actions tended to group themselves into "persuasive" and "coercive" factors. Those who saw greater danger in F-1 behaviors favored coercive actions while those who saw the F-2 type behaviors as dangerous favored persuasive actions.

Other, less reliable factors included a "Roughneck" or "Leather

Jacket" group of behaviors (F-3) which stressed such behaviors as fighting and theft. Another factor had homosexual behavior and abortion as identifying behaviors (F-4). The behavior of moving also appeared at the top of a highly variable factor (F-5). Factors 3-5 were quite variable in content and should be regarded as only suggestive. Some age and sex differences in factor structure were evident.

A generalized pattern of reported behaviors was found which showed that use of most drugs tended to go together. In a college group cigarettes and alcohol were reported to be the first drugs used followed (for those who used such drugs) by marijuana and then other, more dangerous drugs. Sexual intercourse and theft were also found to relate strongly to the use of alcohol and marijuana in this college group. Another college group showed that higher use of medical care also was related to drug use. Drug use, when factored, yielded an illegal drug and a legal drug factor in the school groups.

In the school groups drug users tended to see less risk and more gain in the F-1 or "Sex-Pot" factor behaviors. Drug users also saw less risk for the F-2 or "Masculine-Aggressive" type behaviors, but they saw less gain for these behaviors. Comparison of ratings of F-1 and F-2 behaviors may provide a means for predicting which users of cigarettes and alcohol will be most likely to move on to marijuana and other drugs.

A model was suggested that saw tobacco and alcohol as "training grounds" for the use of marijuana. Marijuana use, in turn, provides a base for moving on to still more dangerous drugs. However, not all smokers and drinkers use marijuana and most who do do not use marijuana regularly. Similarly, relatively few who try marijuana move on to other drugs. Even so, alcohol is tried by nearly everyone and is in wide regular use even at the junior high level. Tobacco is also widely sampled but is used less regularly. Marijuana use is widespread on a trial basis rising from 1/4 of the junior high students to nearly 2/3 of the college students. Regular use of marijuana seems to level off at about 20%. Other "hard" drugs are much less often tried and infrequently used on a regular basis.

Drug users showed strong tendencies to rate the drugs they use as having low risk and high gain. They also see most actions against drugs as more ineffective than do non-drug users.

The correlations between behavior and attitude ratings are quite high and it was worth while to compute multiple regression equations. The multiple correlations for predicting behavior ranged from .825 for marijuana use to about .500 for sex behavior. It should be possible to use attitude ratings to predict which individuals or groups are highly prone to drug use before drug use starts. It should also be possible to evaluate the effects of action programs by noting changes in attitude ratings.

It was recommended that additional studies be conducted with still younger children and to follow these children over several years in order to validate predictions of behavior. Motivational theory was used to suggest courses of action in anti-drug programs. Perception of high risk should be developed where such risks can be objectively demonstrated. The low gain value of socially undesirable behaviors can also be taught where it can realistically be shown to be the case. The probable consequenc of immediate behavior on future goals should also be emphasized, but the goals which are used must be ones with which the person presently identifies.

Risks can be lowered and gains raised for desirable behavior by better classroom and community environments. Perhaps the most important action possible would be to give honest good examples by parents, teachers, peers and society in general. So long as large profits are made from drugs and intensive advertising of them goes on, and so long as adults continue to model drug use, the only real hope of reducing drug abuse and misuse by the young is through intensive cognitive and affective domain education starting at the kindergarten and continuing throughout elementary and secondary levels. It must be understood, however, that the schools cannot provide a panacea. There is no substitute for enlightened home and community approaches, for this is a massive cultural problem affecting adults as well as the teen and subteen-age groups.

A Report on the Feasibility of Using Risk-Taking Attitudes as a Basis for Programs to Control and Predict Drug Abuse.

Richard E. Carney, Ph.D.

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California Western Campus

Part I.

Introduction

This report presents findings from eight studies which use risk-taking attitudes as tools for the prediction and control of drug abuse. These studies were conducted over a two-year period and included over 650 subjects from the junior high school level through adults. Although the number of subjects studied is fairly large, a representative sample of the general United States population has yet to be obtained. In addition, since the studies were exploratory in nature, the structure of the attitude questionnaires were altered several times to provide answers to new questions. For all of these reasons the results should be accepted as only suggestive of what might be found by more extensive research.

It is best that the reader be advised of the above limitations of the present research at the very outset because, as will be seen, the results that were obtained by these initial studies were exciting and in some instances rather spectacular. Specific limitations of the research will also be mentioned as they arise in the description of each study.

A BRIEF HISTORY OF THE RESEARCH

The author has served for three years as a member of the San Diego Council for Smoking and Health. He has also conducted research on smoking behavior for a number of years and has been particularly interested in the physiological and motivational correlations of smoking behavior (Carney, 1967, 1968c, 1969).

One of the quite general findings about smoking behavior is that it tends to be related to extraversion and achievement motivation (Carney, 1967; Eysenck, 1967, Smith, 1967). Achievement motivation, in turn, has been studied as a determinant of decision making on risky behaviors (Atkinson, 1958, 1964; Atkinson and Feather, 1966; Carney, 1968c). The question arose as to the possibility that the riskiness of cigarette smoking might help to select it out as a behavior that would appeal to those who were highly achievement motivated. Perhaps the general theoretical approach used by students of decision-making in risky situations might be applicable not only to smoking, but to drug use in general and to other risky behaviors.

To further explore the above possibility the author, with the cooperation and support of Smoking Research/San Diego, organized the "San Diego Conference on Risk-Taking Behavior in High School and College Students" which was held in January, 1968. As the research part of this conference a "Risk-Taking Attitude Questionnaire" (RTAQ) was devised and administered to the participants in the conference. The conference was so successful and the results of the RTAQ so interesting that a number of meetings on the same theme were subsequently held in the San Diego area.

In the Fall of 1968 the author was asked to consult with the Title III program aimed at developing a drug abuse curriculum for the Coronado, California, schools. Since that time the research has proceeded on a broad front to establish the utility of the risk-taking approach for use in school curricula. In order to do this it was necessary to include both college students and adults in the research in order to place the attitudes of the school youth in a larger context. It was felt that a knowledge of specific areas of agreement and disagreement between age and status groups (teachers, parents, etc.) would be of invaluable help in preparing materials for use in the schools.

THE THEORY AND GOALS OF THE RESEARCH

In principle the motivational theory used here is quite simple. The person seeks to optimize his satisfactions and minimize his dangers and disappointments. As the person proceeds through life he is faced with a series of choices and decisions. As these choices are made feedback is obtained on the quality of the outcome. Was it satisfying, painful, dull, or what? Eventually each individual learns a set of values which guide his behavior. In any decision making situation he can anticipate the value-related consequences of the available alternatives. Sometimes a decision is then reached on purely rational grounds, but usually the person is only partially aware of the reasons for this choice.

Let me now outline in more detail the system of motivation which I have been using. It is a modification of the one developed by Atkinson and his co-workers (1964).

First a few definitions:

Motive: an individual's perceptual-motor pattern forms an orientation that defines both a goal and the behavior appropriate for achieving it. This definition may contain any combination of inate and learned elements.

Drive: the amount of physiological energy which is available for a particular motive. This energy is assumed to come from stimuli arising within the organism and is a function of the amount of "need" or "want" present. The "need" is assumed to arise from departures from a customary or desired level of consumatory activity (both deprivation and oversufficiency). Drive is probably both generalized and specific to particular "need" or "want" states.

Expectancy: the subjective probability of success of a goal-directed behavior sequence. The question asked is: "Can I get to the goal?" This probability is assumed to be arrived at as a function of the particular situation and the individual's experience with his ability to attain such or similar goals (or deal with similar problems).

Incentive: the subjective probability of "reward" or gain from successful consumatory behavior. The question asked is: "If I reach the goal and interact with it, what are the chances that it will satisfy my motive?" Incentive value is assumed to be a function of the quantity and quality of the available goal as evaluated from experience.

Subjective Expected Utility (SEU): Motive multiplied by (x) Drive multiplied by (x) Incentive. The question answered here is: "With my level of motive and the level of drive for this motive which is present, what would it be worth to interact with this particular type of goal?"

Finally we assume that aroused behavior is the net result of: (Expectancy x SEU) - (Expectancy x SEU for all competing motives).

In short, the gains are weighed against the risks and the decision is made either to do or not to do the behavior. In the present research the subjects have simply been asked how much risk and how much gain they expect from a given behavior. The hope was that this straightforward approach would give at least rough working estimates of the positive (gain) and negative (risk) expected values. For purposes of practical prediction it is not necessary to know the particular values or kinds of probabilities, motives, incentives and drives. Such information is of great scientific interest, however, and an initial attempt to measure motivation was made on the last sample (see page 12).

It is possible to obtain expectancies (subjective probabilities of success or failure) but this step has yet to be taken in this research. The first attempts have focused on overall estimates of risk and gain in order to see how useful they would be.

Although they do not play a direct role in the theory, ratings were also made of the effectiveness of certain actions which might be used to control risky behavior. Such ratings were made primarily to discover group differences in the perception of these actions so that educational materials and discussions could be organized around these differences.

USES OF THE DATA

Behavior prediction: Several uses were anticipated for the attitudinal data. Actual behavior should be predictable from the ratings of risk and gain. In general, those who see less risk and more gain from a behavior should do that behavior more often. It is also likely that those who engage more frequently in a given behavior will see actions taken against that behavior as less effective. Over groups of people those behaviors having higher perceived risk should have lower perceived gain and should occur less frequently.

Action and evaluation: Knowledge of which actions are seen as being most effective should provide a basis for starting actual action programs which have the widest possible support. Also, it should be possible to evaluate the effect of action programs by observing the changes in perceived risk and gain from that behavior.

Prevention: When groups or individuals having attitudes typical of those who do use drugs can be identified in advance of actual drug use, it should be possible to take effective cognitive and attitude-changing steps to forestall or minimize drug use. In general, educational or other efforts should be directed to increasing perception of risk and decreasing perception of gain from "undesirable" (depriving) behaviors in constrast to "desirable" (enhancing) behaviors.

From the present point of view it is most important to have alternative "desirable" behaviors (choices) available as substitutes for "undesirable" ones. It is unlikely that the "riskiness" of undesirable behaviors can be raised high enough to block them (without severe damage to the individual and to society) if these behaviors are the major source of anticipated or actual gain. Indeed the problem of drug use would not arise at all if each person had available socially approved behaviors with higher gain ("pleasure," "release," "satisfaction," etc.) and less risk than drugs offer. It is easy to look for "evil" within the individual, or "rottenness" in the society, and to blame these demons for drug use or other failures to behave "nicely." The effective and hard-headed approach suggested by the theory used here, however, is to look for the reasons for the undesirable behavior and to so change the situation that the next decision (choice) is the one desired by society.

AN OVERVIEW OF THE RESEARCH PROGRAM

This section of the report will present a general outline of the entire research program so that the reader will have a "map" to guide him through a rather complicated series of steps. Additional, more specific descriptions of the procedure will be given as each section of the research unfolds.

Samples: Table 1. shows the eight samples that were studied and gives some detail as to their ages, sex and composition. As was noted earlier a good random sample of the entire United States population was not attempted. The conference sample (1) and the Coronado adult sample (5) were composed of adults who had strong concern about drug abuse. The samples of teachers (3) and parents (4) were small and also composed of persons seriously concerned about drug problems. None of the adults are "typical" individuals in the general population. They are, however, fairly representative of professionals and parents who are most concerned about the problems of drug abuse. Since these are the very persons who

Table 1.

SAMPLES

Name	Composition	Date	N Males	N Females	Total	Age
1. Conference **	Professionals from all areas of youth work	January, 1968	90 + (?) *	10 + (?)	103	Adult
2. CWU	Introductory Psychology students (frosh & sophs)	Fall, 1968	58	64	122	College
3. Teachers	Coronado School teachers	Fall, 1968	4 + (?)	6 + (?)	12	Adult
4. Parents	Coronado School parents	Fall, 1968	2 + (?)	5 + (?)	14	Adult
5. Coronado Adults	Church adult group - Comminity-Wide Committee for Youth Opportunities	Winter, 1969	58	22	80	Adult
6. Junior High	Coronado 8th Grade	Spring, 1969	58	54	112	School
7. Senior High	Coronado 11th Grade	Spring, 1969	60	53	113	School
8. College	Introductory Psychology and Sociology plus some Advanced Psychology and Sociology students at a private 4-year Liberal Arts College in California	Spring, 1969	50	51	101	College
			380 + (?)	265 + (?)	657	

* + (?) indicates that the sex was not indicated on some questionnaires and the exact number of males and females is not known. In the tables which follow the numbers in the samples will change due to incomplete answers by some subjects.

** The initial questionnaire and data analysis of Sample 1 were supported in part by a grant # PH 108-66-46.

must construct, teach and give support to programs directed at drug abuse, the adult samples used here are ideal for the purposes of this report.

The college student samples (2 and 8) are more representative of the college youth. These samples, however, were taken at selective private institutions and lack representation from minority and low-income groups. Samples from public universities and junior colleges could give different responses, but the college samples used here should differ from the general college population in a conservative direction.

The school samples (6 and 7) consist of the majority of students in certain grades of a junior and senior high school and are excellent ones for present purposes. Coronado, California, however, is not a typical U.S. community in many respects (it is on a relatively isolated "island," has a very high proportion of commissioned and non-commissioned service families -- 68.8% in 1968-69 -- represented in its schools, and lacks representative groups of minority and very low-income families). Caution should, therefore, be exercised when generalizing or comparing the results of this report with other school districts which do not have comparable populations. There is, however, no good reason to expect that the general pattern of the present results would not hold for other areas.

RTAQ instruments: Table 2. shows in outline form the structure of the various RTAQ forms. The actual forms may be found in the appendices. A 50-item original form was used in the first four samples. This form had only ratings of risk and possible actions and served to establish the reliability and general structure of the questionnaire.

A revised Adult Form was used with sample 5 - the Coronado adults. This form expanded the original list of 20 behaviors to 25 and asked about specific types of both risk and gain. Ratings were made both for "self" and for a "young person." It was hoped that comparisons of attitudes toward risks for one's self and "young persons" would give insights into "gaps" or inconsistancies in the standards adults held for themselves compared with those they hold for young people. "Self" and "young" ratings of ten possible actions to control five different areas of behavior were also made. Demographic information on drug use was added to see if ratings would relate to behavior.

The Secondary Form (samples 6 and 7) expanded the types of risks and gains to four specific areas of each and continued to ask about actions against five types of behavior. Demographic information on drug use was also included. It was hoped that this form would show age and sex-specific changes in attitudes toward specific types of risks and gains. Do the "important" behaviors and risks change with age and sex? If so, then drug programs will have to be aimed at different targets for different groups. Section V B, presents results which relate to this question, see page 165.

Finally the revised college form (sample 8) narrowed the type of ratings of risk to one and the number of behaviors to 10. Five areas of gain were rated but no actions were included. Instead, the degree of motivation for each of the possible types of gain was rated. Motive ratings were included both to see if they would add predictive power and if they would give some insight into what personal definitions of gain and risk might be used by the students (see page 199). The frequency of behaviors, other than drug use, were included to provide

Table 2.

STRUCTURE OF RISK-TAKING ATTITUDE QUESTIONNAIRES

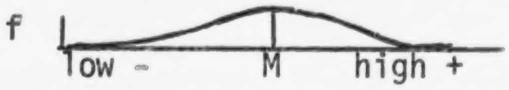
SAMPLE USING *	QUESTIONNAIRE	NUMBER & TYPE OF RISK	NUMBER & TYPE OF GAIN	NUMBER & TYPE OF ACTIONS	TYPE OF RESPONSES
1, 2, 3, 4	Original -- Includes: age and sex only (50 ratings)	20 - Personal 20 - Social	None	10 - General	Pencil (1, 3, 4) Porta-Punch (2)
5	Revised Adult -- Includes: age, sex, income, religion and drug use (300 ratings)	25 - Injury - Self 25 - Injury - Young 25 - Disapproval - Self 25 - Disapproval - Young	25 - Problem Solving - Self 25 - Problem Solving - Young 25 - Pleasure - Self 25 - Pleasure - Young	10 - Smoking - Self 10 - Smoking - Young 10 - Racing - Self 10 - Racing - Young 10 - Sex - Self 10 - Sex - Young 10 - Drugs - Self 10 - Drugs - Young 10 - Cheating - Self 10 - Cheating - Young	Pencil
6, 7	Secondary -- Includes: age, sex, religion and drug use (250 ratings)	25 - Injury 25 - Self Respect 25 - Loss of Friends 25 - Law	25 - Feeling Adult 25 - Gain Friends 25 - Thrill 25 - Good Feeling	10 - Smoking 10 - Drag Racing 10 - Sex 10 - Drugs 10 - Cheating	Porta-Punch
8	Revised College -- Includes: age, sex, religion, drug use and other risky behaviors such as sex and stealing; also age and order of behaviors (75 ratings)	10 - Social Punishment	10 - Personal Achievement 10 - Thrill & Pleasure 10 - Gain Friends 10 - Confidence in Sex Role 10 - Problem Solving	No Actions 5 motives as shown under Gains	Porta-Punch

* See TABLE 1. for a description of the samples.

NOTE: See Appendices I, II, III, and IV for copies of these questionnaire including the instructions, etc. The behaviors rated may also be obtained from the various data tables.

a test of the risk-taking approach to non-drug behavior and to see what other types of behavior were included with drug use. The age and order in which the 10 behaviors were first tried was also obtained to provide information about how drug use develops.

Statistical procedures: The reports which will follow this section use a large number of terms and information-display techniques which may not be familiar to all readers. This section, therefore, will briefly review the terms and procedures which have been used in order that the following text may be more intelligible.

1. X = a score (rating, age, etc.).
2. Frequency (f): the number of scores having a particular value.
3. Number (n): the number of subjects in a condition. The number is the sum of the frequencies. ($n = \Sigma f$).
4. Σ is a Greek letter (sigma) meaning "the sum of." It instructs the reader to add up all the scores.
5. The mean (M): is equal to the sum of the scores divided by the number of the scores ($M = \frac{\Sigma X}{n}$).
6. A distribution shows how scores are found over the whole range of possible values. The normal distribution is bell shaped and has the mean in the center where most of the scores are found. It looks like this: 

. Most measures of human behavior are approximately normally distributed if they are obtained from a truly representative sample.
7. As is obvious in 6 above not all persons are located at the mean and it is necessary to have some measure of differences from or variability around the mean. The most common measure used is the

standard deviation (SD). A typical formula for the SD is: $SD = \sqrt{\frac{\Sigma(X-M)^2}{n-1}}$. In a normal distribution the standard deviation divides the distribution into known parts: ∓ 1 SD includes 68% of the scores and this is commonly called the normal range; ∓ 2 SD includes 95%, and ∓ 3 SD includes 99% of the scores.

8. It is possible to express any score as a ratio of the SD. If we know how many SD'sa score is above or below the mean, we can immediately determine the place of the score in the distribution, that is, if the score is at the 50th, 75th, etc. percentile. Scores expressed as a function of the standard deviation are known as standard scores. In this paper a standard score, known as the "T score," will be used. T scores let M = 50 and SD = 10 so that, for example, a score of 65 would indicate that the score is 1 1/2 SD above the mean. Any set of reasonably normally distributed values can be converted into T scores and directly compared. Inches, pounds and IQ points can all be converted to T scores.

9. Differences between means: Sometimes we are interested in whether two groups can be considered to have the same means. "Do males and females rate the risk of using marijuana the same way," for example. Since all measures are imperfect it is unlikely that any two groups will have exactly the same mean even if the groups are really very similar. How much difference is to be accepted as ordinary chance fluctuation and when is a difference unusual? In this case we must perform a test of significance which estimates the probability that two means differ only by chance. Statisticians have agreed that whenever the two means would

differ by a given amount less than 5% of the time by chance only, then the difference can be regarded as *reliable* or *significant*. What this means is that if we were to repeat our observations 100 times, on 95 of the observations the results should agree with our present ones and on 5 times they should disagree. Significance in the statistical sense does *not* imply that the results are meaningful or important, only that they are unlikely to be due to chance. The *lower* the probability of chance occurance the better (1%, 1/100%, etc.).

10. *Correlations*: Correlations compare two or more measures to each other. The basic idea is to estimate how much you can tell about one measure by knowing values of another. For example, if I know how tall a person is, can I say anything about his weight? When correlations do exist they are very convenient since we can make predictions from one measure without having to actually conduct observations on the other. One of the aims of this research is to find measures which correlate with drug use. We are then in a position to say something about drug use without having to directly observe it, or even before it actually happens. It should be noted that correlation does not *necessarily* imply cause. Things that are causally related *must* be correlated but correlations can occur without cause. Height and weight are slightly correlated with IQ but they do not cause it. General good health and nutrition produce both above average height and weight, and better mental function.

Correlations are seldom perfect. They are expressed as ratios which range from zero to ∓ 1. Zero indicates no relationship; ∓ 1 indicates a perfect relationship. Most correlations between human behaviors range from near zero to ∓ .95. Values less than one show imperfect relationships. To estimate the actual magnitude of the relationship shown by a correlation, square the value. The squared correlation shows how much of the variability of one measure can be predicted by another. A correlation of .5 predicts only 25% better than chance leaving a 75% error rate. A correlation of .9 still leaves a 19% error rate.

Some correlations are positive. This indicates that a score on one measure predicts a similar score on another. If the correlation is negative it means that a *high* score on one measure predicts a *low* score on another. For example, a weight of 350 pounds predicts a very low running speed for a woman (and usually for a man). Usually no sign is given a correlation unless it is negative and this report follows such practice.

There are various types of correlations used in this report. Unless otherwise stated the correlations used are Pearson-Product-Moment correlation coefficients (r). The r's are calculated for scores which have several possible values and are assumed to be normally distributed in the population -- for example, correlations between the ratings used in this report.

For a number of comparisons rank-order correlations have been used. Rank-order correlations may be interpreted in much the same way as Pearson r's. They are particularly useful when comparing small sets of scores by hand calculation. Each set of scores is ranked from highest to lowest and the ranks are then compared. A high correlation shows that the ranks in each set were in agreement.

In this study rank-order correlations are used to compare sets of means and factor loadings.

When comparing qualitative variables such as sex and religion with quantitative measures such as ratings, it is possible to assign numeric values to the qualitative variable and compute correlations. For example, females = 0 and males = 1. This procedure gives correlations which represent the degree to which the sexes or religions differ on their ratings and is more efficient than making separate comparisons of means when a large number of other correlations must also be computed. In the example cited, a positive correlation indicates that the males had higher average rating than females. A negative r would have the reverse meaning. The larger the r the greater the difference.

11. Factor analysis: When many measures are correlated with each other there may exist clusters of measures which are highly related to each other but not to other measures. Such groups of interrelated measures are called clusters or factors depending on the particular statistical procedure used, but the general meaning is the same in both cases. The statistical manipulations give "loadings" for each measure on the factor. The simplest way to view these loadings is as indices of "agreement" between the measures. They are a sort of average correlation between a measure and all others in the cluster.

When calculating the factors "Centroid" procedures have been used to obtain factors which are as nearly orthagonal (independent) of each other as possible. The first factor is the one which contains the measures having the highest average agreement (the "Centroid"). The loadings for this factor are then calculated and the data is "corrected" for the effect of this factor. This correction is equivalent to subtracting from each score a value for that score's standing on the first factor. If a score is related almost entirely to the first factor it is reduced to nearly zero and has little effect on future calculations. The "corrected" set of scores is then factored again to obtain the next most highly related set of measures and their loadings and so on. This process can continue until some arbitrary cut-off point or until all of the values are reduced to zero. In the present case the number of factors was arbitrarily limited to at the most six and usually five since this number seemed likely to contain most of the useful information in the data.

12. Multiple regression. Multiple regression is similar to factor analysis except that a criterion measure to be predicted is selected (such as drug use) and then a set of correlations between possible predictors and this criterion are calculated along with all possible correlations between the predictors. Then a "regression" equation is derived which combines all of the predictors to give the maximum correlation with the criterion. To use this regression equation the set of scores for each person are multiplied or "weighted" by values known as "regression coefficients." The products of the scores and the regression coefficients are then added to yield a predicted score on the criterion (e.g., predicted amount of drug use). In some cases a measure will be included in

the regression equation which has little or no correlation with the criterion yet still contributes to the final multiple prediction r. Such measures correlate with one or more of the predictors and serve to eliminate or "suppress" the scoring on these predictors that is not correlated with the criterion. Thus, the "suppressor" measures serve to correct for, or subtract, irrelevant information in the predictor and enhance its correlation with the criterion. McNemar (1949) provides an excellent introduction to the above topics, and is recommended if further guidance is needed.

Part II.

Risk Taking Attitudes -- Means

This section of the report presents the findings concerning the various ratings, their means and their correlations with each other. The results will be given in roughly the same order in which they were obtained.

A. MEANS OF SAMPLES 1-4 - THE ORIGINAL RTAQ

METHOD

Samples: In January 1968, at a conference on risk-taking (Carney, 1968a) approximately 100 professionals in various fields of youth work (Sample 1) took the first version of the Risk-Taking Attitude Questionnaire (RTAQ). These professionals (identified hereafter as the Conference group) were mostly males but no reliable sex count was obtained from the questionnaire.

A corrected version of the first RTAQ was given to small groups of teachers (Sample 3, n = 12) and parents (Sanple 4, n = 14) from the Coronado, California, school district. As was the case with the conference group, these adults were highly interested in problems of drug abuse. They in no way represented an adequate sample of teachers and parents.

Still another version (modified for use with the Digitutor, Carney, 1968c) of the first RTAQ was given to 58 male and 64 female "Introductory

Psychology" students at California Western University (Sample 2, the CWU Sample) during the Fall Quarter of 1968.

Procedure: The RTAQ was administered to groups. Self-explanatory instructions were read to the subjects and printed on the RTAQ. Individual questions about procedure were answered as they arose. The subject indicated his response either by circling or punching on a 1-7 scale of increasing amount of risk or effectiveness. The 1-7 categories were not defined, simply listed with polar adjectives of Most and Least. This form of RTAQ may be found attached as Appendix 1. The version shown is the final one of this series which was given to the CWU sample. The 20 behaviors were listed twice, once for individual and once for social risk. Ten possible management actions were also given and rated for possible effectiveness. The data consisted of 50 ratings from each subject plus items for ranking the most risky behaviors or most effective actions. These latter items were not analyzed after the Conference data showed them to yield the same information as the ratings. Background items on age, grade, religion, smoking, drinking, use of legal drugs and medical care were included for the CWU sample.

Analysis: All data were placed on cards and computer analyzed for means, variances, correlations and cluster or factor analysis. The obtained means were converted to normalized T scores (mean = 50, standard deviation = 10), and also were rank ordered. The T scores were based on the deviations from the grand mean of the pooled data on each type of rating and the variance of the combined data. The scores provide a convenient basis for direct comparison across groups.

RESULTS

Figures 1, 2, and 3 show the mean T scores of the groups on Individual, Social, and Action ratings.

All groups gave comparable ratings of the individual risks in terms of the relative order of the means. The Teachers and Parents tended to rate most behaviors as somewhat more risky than the conference and CWU groups (see Figure 1). The raw score grand mean was 4.564 and the standard deviation was 1.434. Table 3. gives the rank order correlations between these sets of means. The lowest correlation was between the CWU males and the teachers (.785). All of the other correlations are near .90 and all of the correlations in Table 3. are significant at well beyond the 1% level. These correlations can be seen graphically in Figure 1 as a general agreement in the pattern of means for all groups.

Figure 2. shows the means for the social risk ratings and Table 4 gives the rank order correlations between the set of means. There is again excellent agreement among the groups. The grand mean of the social risk ratings was 4.191 and the standard deviation was 1.878. In addition the rank-orders of the individual and the social risks are also highly related (Table 5). The major consistent difference in the order of the risk ratings was that the conference group saw less social risk in the use of marijuana than did the other four groups (see Figure 2).

When the "actions" are considered there is considerably less agreement among the groups. Figure 3 and Table 6 show that the parents

FIGURE 1

Means - Individual Risks - For Samples 1 - 4

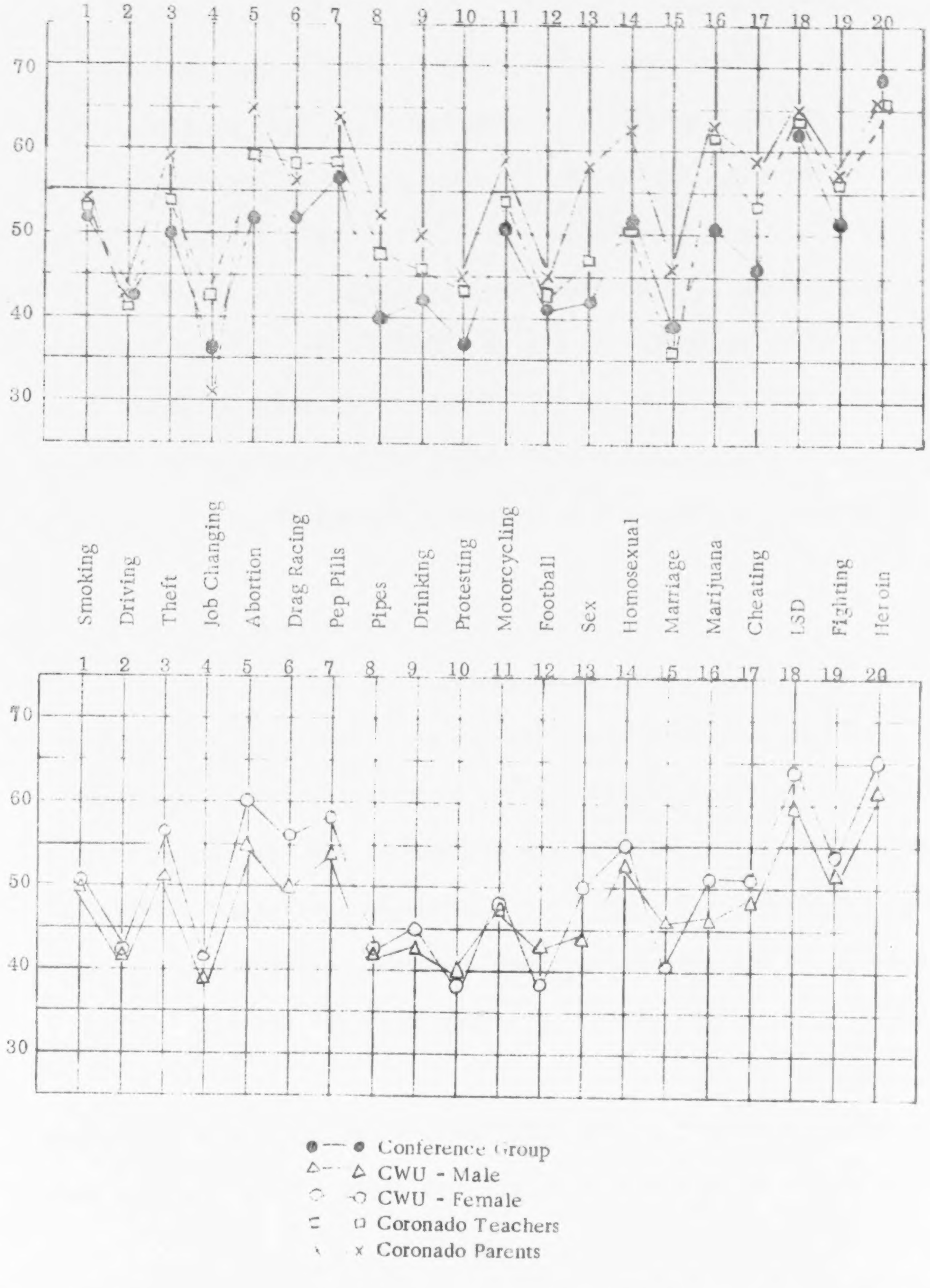


FIGURE 2

Means - Social Risks - For Samples 1 - 4

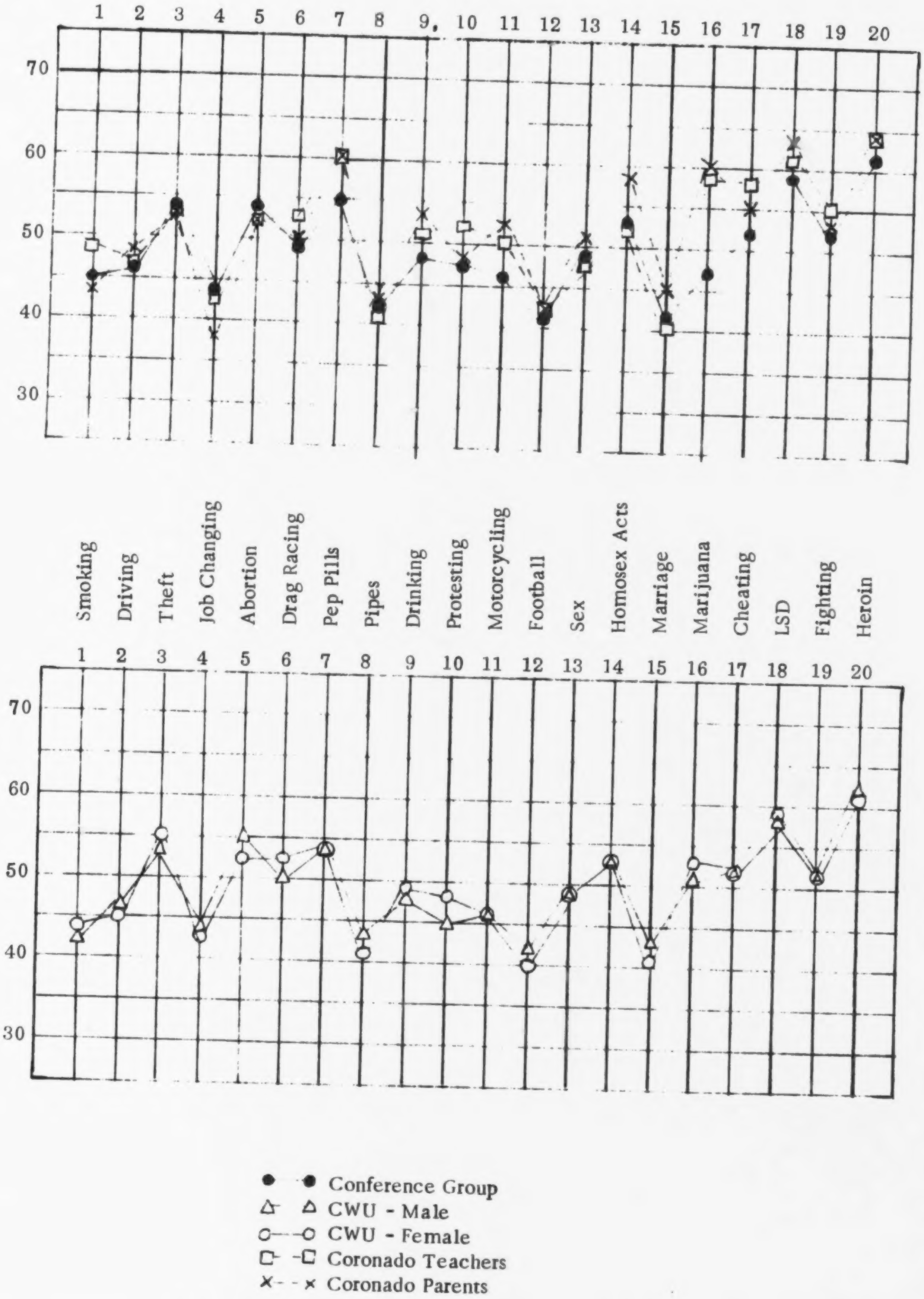
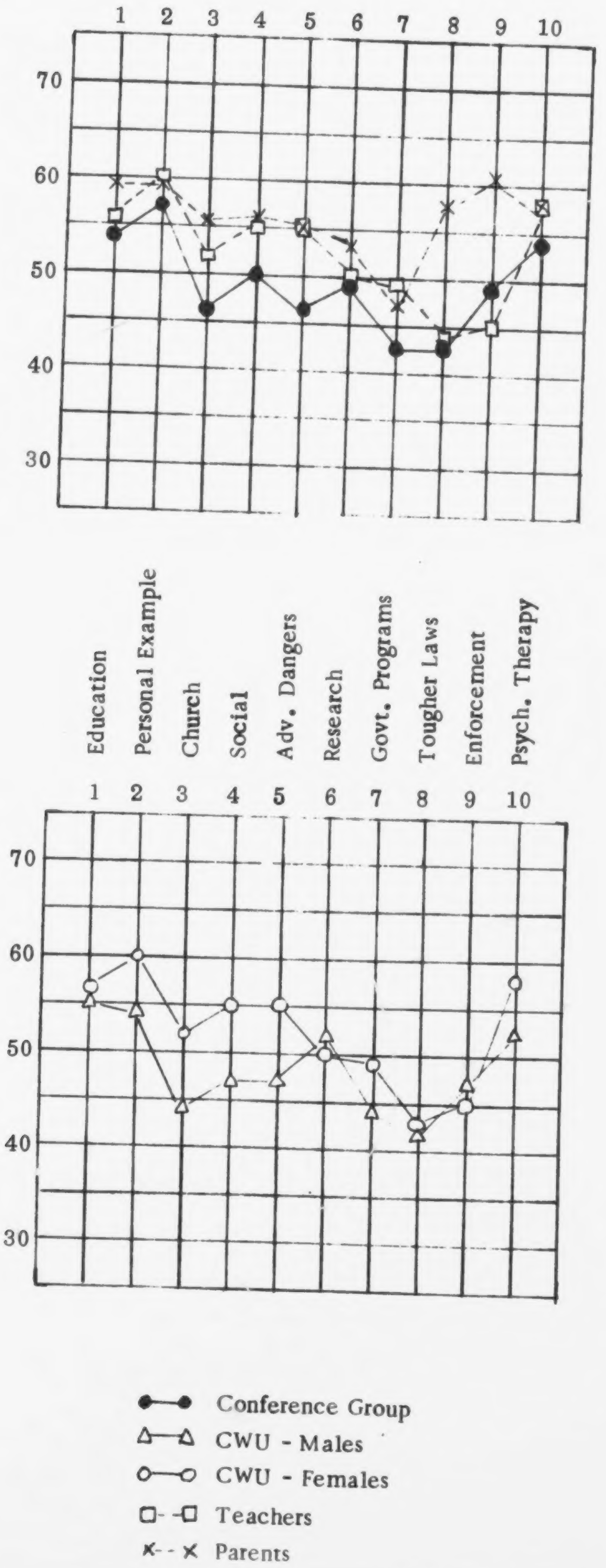


FIGURE 3

Means - Actions - For Samples 1 - 4



were consistently more optimistic about the actions than the other groups. Parents also placed greater faith in the use of law enforcement and the passing of even stricter laws than any other group. Both parents and teachers saw considerably more hope for the effective use of advertising and church programs than the other groups. The grand mean of the "action ratings" was 4.253 and the standard deviation was 1.578.

Even though the samples used here were far from representative of the general population, they differed widely from each other in many characteristics. In spite of such differences there was close correspondence between the groups in their ratings of the relative risks of the various behaviors. Such high agreement indicates that the RTAQ is tapping stable and widely held attitudes and speaks well for the reliability of the measuring device.

There seems to be little distinction made between the individual and social risks so that either one of these ratings would suffice. The major area of disagreement is in the ratings of the "actions." Everyone agrees on what the problems are, but the parents who participated in this study place much greater hope in church and legal action than the other groups. There is a general trend for all groups to favor direct personal interaction and education over governmental-type (law enforcement and legislative) actions.

If present indications hold up over wider samples the "gap" in attitudes over "actions" will not be between generations but between youth and their teachers-counsellors on one side and parents on the other. A suggestion which might be derived from the data is

TABLE 3.

Rank Order Correlations Between Rating Means of Individual Risks For Samples 1 - 4

	Conference	CWU - Male	CWU - Female	Coronado Teachers	Coronado Parents
Conference	---	.928	.940	.955	.948
CWU - Male	---	---	.880	.785	.888
CWU - Female	---	---	---	.854	.888
Teachers	---	---	---	---	.868
Parents	---	---	---	---	---

TABLE 4.

Rank Order Correlations Between Rating Means of Social Risks For Samples 1 - 4

Conference	---	.889	.877	.952	.985
CWU - Male	---	---	.961	.899	.916
CWU - Female	---	---	---	.936	.937
Teachers	---	---	---	---	.899
Parents	---	---	---	---	---

TABLE 5.

Rank Order Correlations Between Rating Means of Social & Individual Risks For Samples 1 - 4

Conference	.864	.754	.777	.755	.755
CWU - Male	---	.761	.786	.726	.758
CWU - Female	---	---	.874	.788	.814
Teachers	---	---	---	.877	.794
Parents	---	---	---	---	.909

TABLE 6.

Rank Order Correlations Between Rating Means of Actions For Samples 1 - 4

Conference	---	.927	.889	.885	.497
CWU - Male	---	---	.948	.758	.400
CWU - Female	---	---	---	.727	.533
Teachers	---	---	---	---	.279
Parents	---	---	---	---	---

to capitalize on the high expectations and general consensus of all groups in the efficacy of personal example and education and direct attention and energy to such techniques. By doing this it may be possible to diffuse the issue of legal approaches. The real problem, of course, is that the actual utility of any of the suggested actions remains to be demonstrated.

The small parent group also tended to see most behaviors as more risky than the other groups. Knowledge of such gaps in attitudes offers a concrete basis for discussion and the design of educational materials. We have at our disposal specific targets rather than generalized areas. For example, the behaviors involving use of drugs such as LSD and marijuana are rated much more dangerous by teachers and parents than by the college and conference groups. The parents placed much greater faith in coercive techniques than any other group. The reasons for such differences will have to be discovered and the "gaps" will have to be narrowed before coordinated adult action is likely to be achieved.

B. MEANS OF CORONADO ADULTS - SAMPLE 5

METHOD

Sample: The questionnaires were administered to a group of adults at a Sunday morning breakfast of a Catholic mens' organization. Another group of adults were obtained at an evening meeting of a citizens' organization which was formed to study drug abuse problems. In all, there were 58 men and 22 women who participated. Participation was strictly on a voluntary basis at each meeting and, although no formal record was kept, a substantial majority took part. However, the sample is clearly non-representative of the general population of Coronado and all conclusions drawn from it, while indicative, must be considered most tentative.

Procedure: The RTAQs (Revised Adult Form, see Appendix II) were distributed to the adults after an initial explanation of the project was given. The subjects were assured of the confidentiality of all results. The church group was instructed to read the instructions and to mark their answers on the RTAQ with the pencil which was in an envelope with the RTAQ. Individual questions were answered directly whenever a hand was raised asking for help. As the RTAQs were completed they were reinserted in the unmarked envelope and collected.

So many questions arose with the church group that the subsequent citizens' organization group was given complete instructions orally and by examples illustrated with an overhead projector. In both groups nearly all of the responses seemed to be valid but there were a few cases of either incomplete or obviously invalid questionnaires.

Analysis: Only one adult admitted using illegal drugs such as marijuana and heroin and these items were dropped from the analysis. Religion was dichotomized with Protestants = 0 and Catholic = 1. All other religion categories had frequencies too small to be useful. The items on tranquilizers and laxatives were also dichotomized into users and non-users due to small frequencies of users.

RESULTS

Figures 4-21 show the mean ratings for the Coronado adults. The men rated the injury risk for the young as greater than for themselves for every behavior except gang fighting and football. The females were not so consistent in the differences between rated risks for themselves and the young (see Figure 4). Both sexes agree that the five behaviors rated least risky for injury over all are considerably more risky for the young. Figure 13 shows the combined ratings for men and women and emphasizes the results for the five least risky behaviors. These are "adult" type behaviors such as "drinking" and "marriage."

Figures 5 and 14 show the ratings for the "risk of disapproval." This risk is seen as nearly the same for both adults and young except, again, for the least risky behaviors.

As can be seen in Figures 6, 7, 15 and 16 the gains are seen to be quite generally greater for the young than for adults. The only consistent exception to this is for "marriage." The differential for "gain" is generally greater than for "risk."

The remaining figures (through 21) reveal a slight but general tendency to rate "control actions" as more effective for the young than for adults. Standard deviations for these ratings ranged from .8 - 1.7 and averaged about 1.3. This value will give a reasonable estimate for use in any tests of significance which may be desired.

The general agreement between the orders of the means of the adult ratings (between sexes, self, young, etc.) is again quite high

FIGURE 4

Means - Injury Risk - Coronado Adults

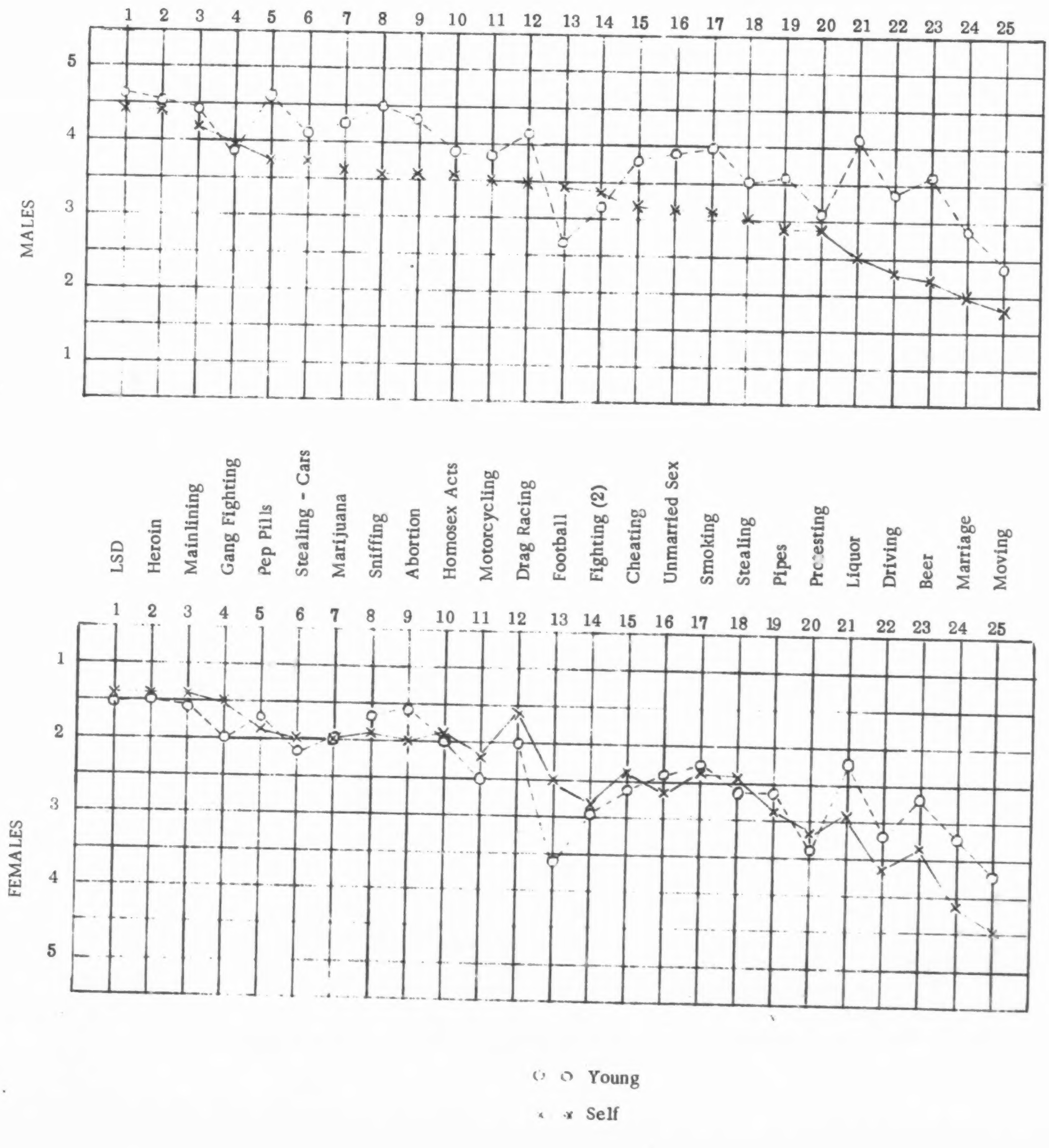


FIGURE 5

Means - Disapproval Risk - Coronado Adults

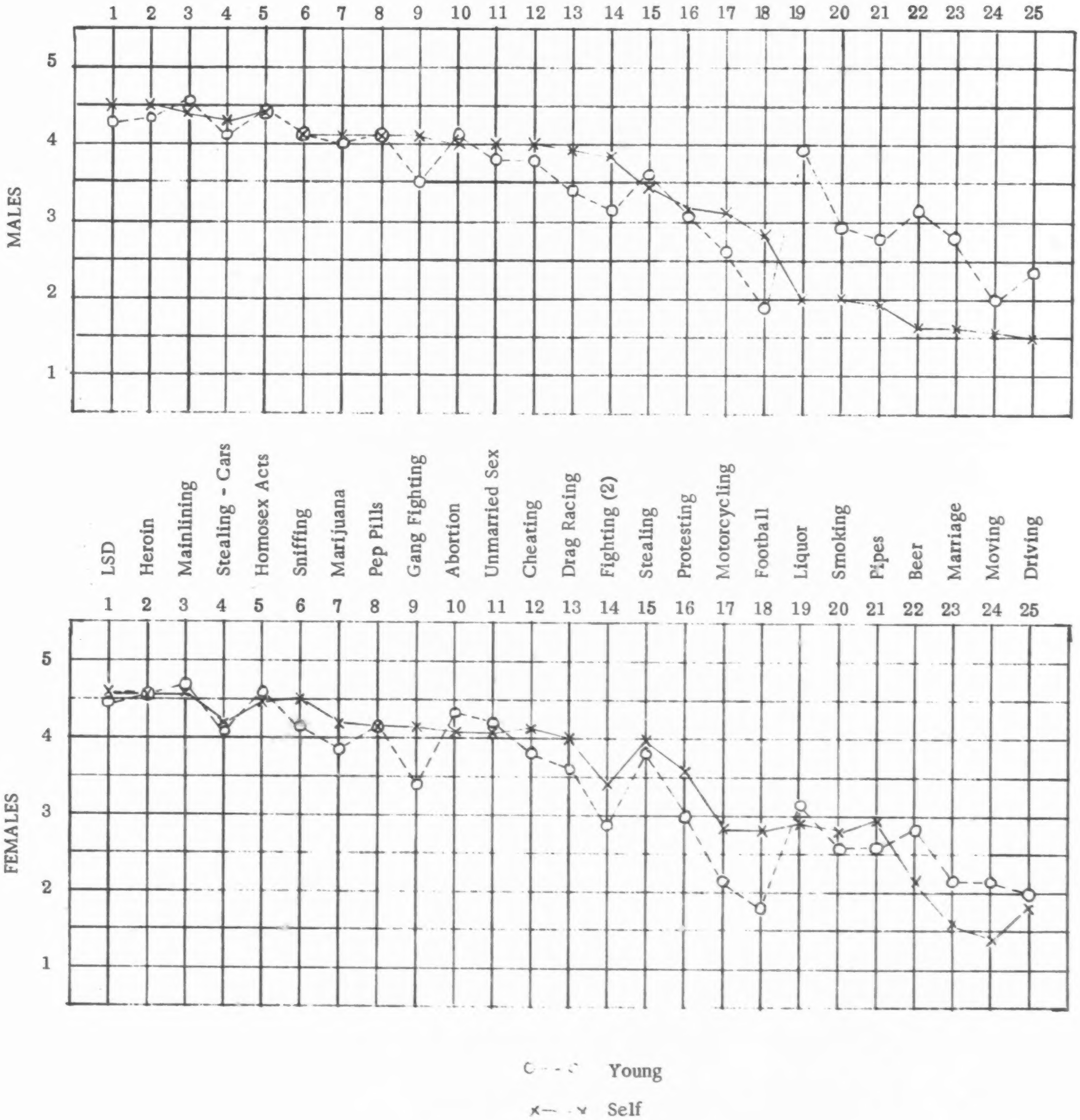


FIGURE 6

Means - Problem Solving Gain - Coronado Adults

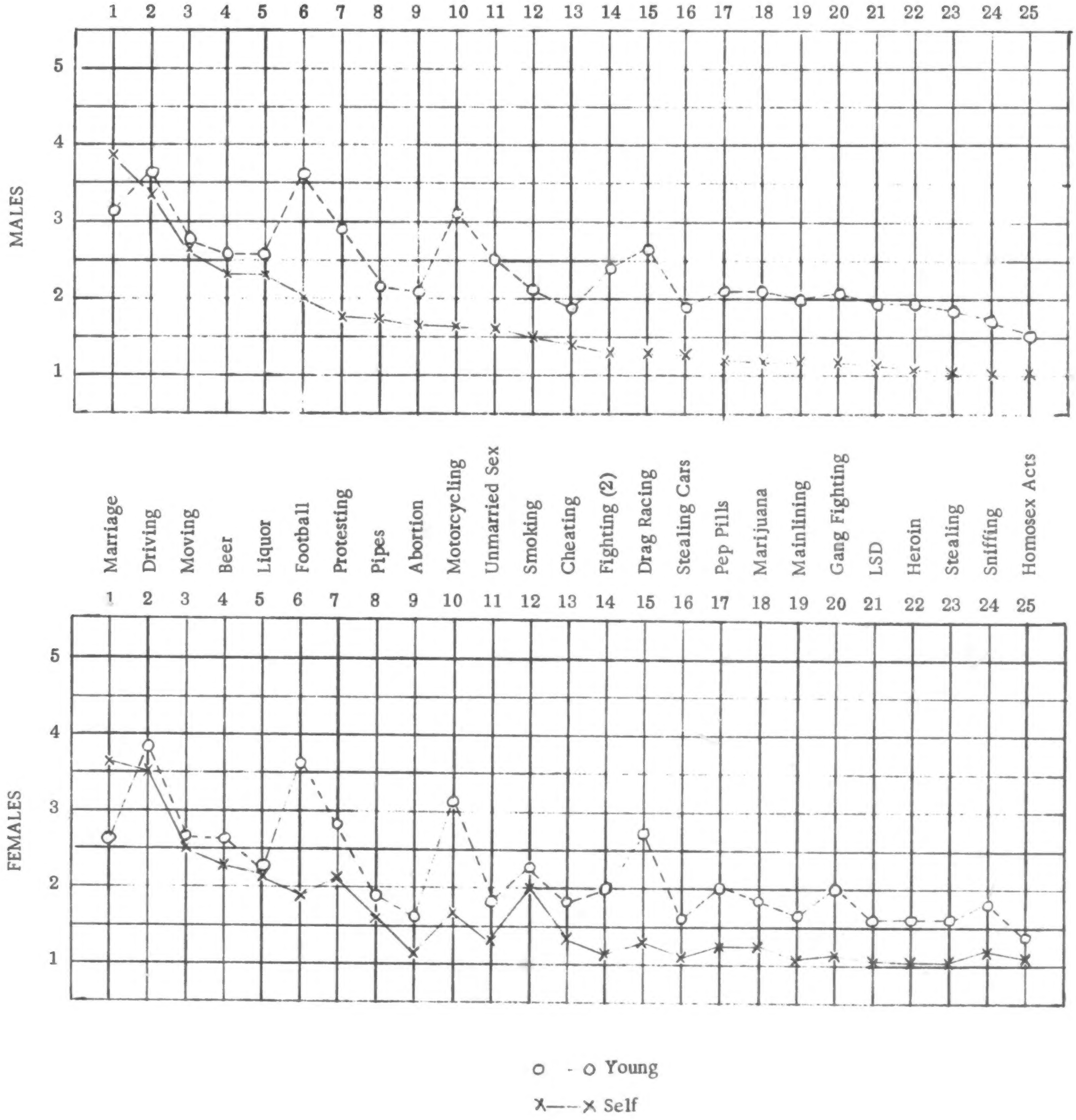


FIGURE 7

Means - Pleasure Gain - Coronado Adults

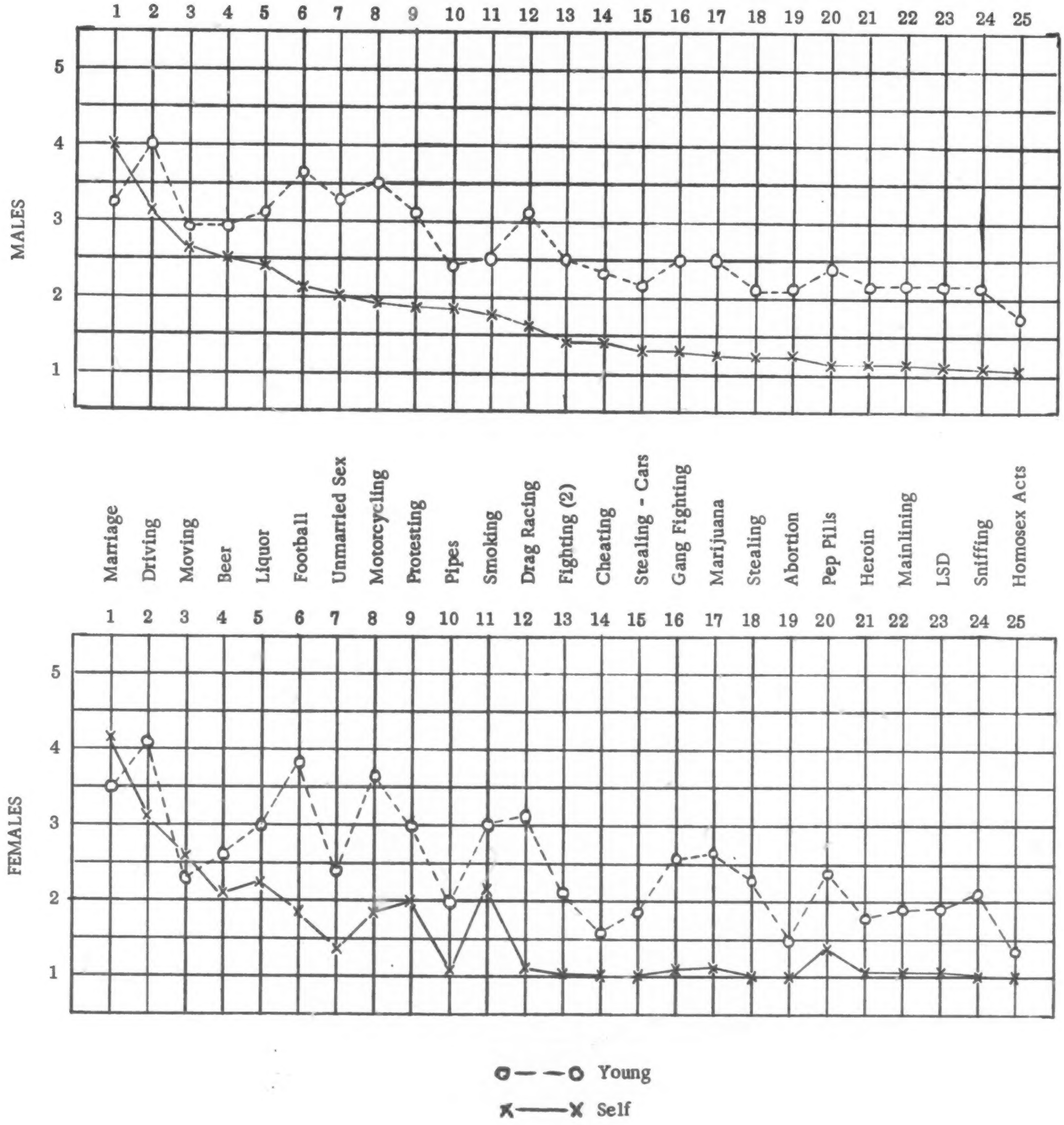


FIGURE 8

Means - Effect Smoking - Coronado Adults

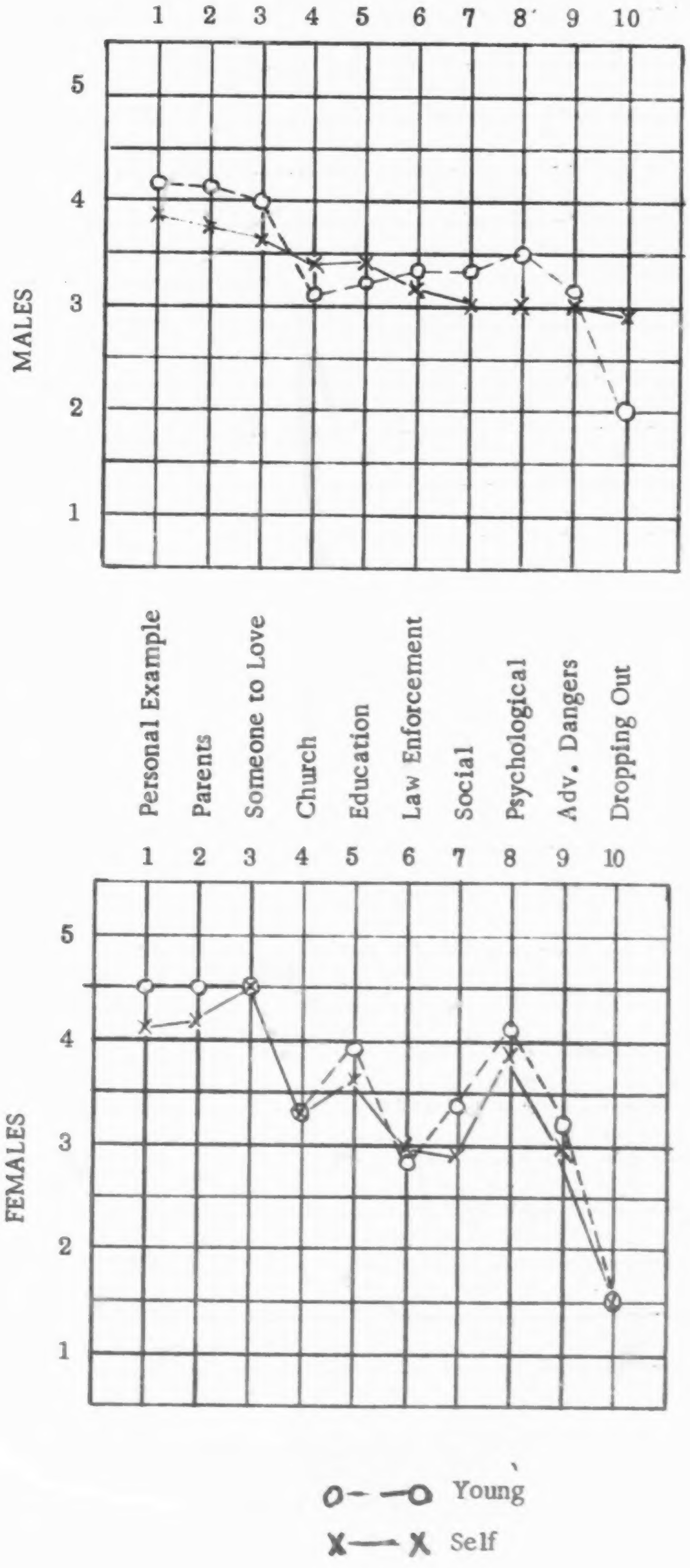


FIGURE 9

Means - Effect Racing - Coronado Adults

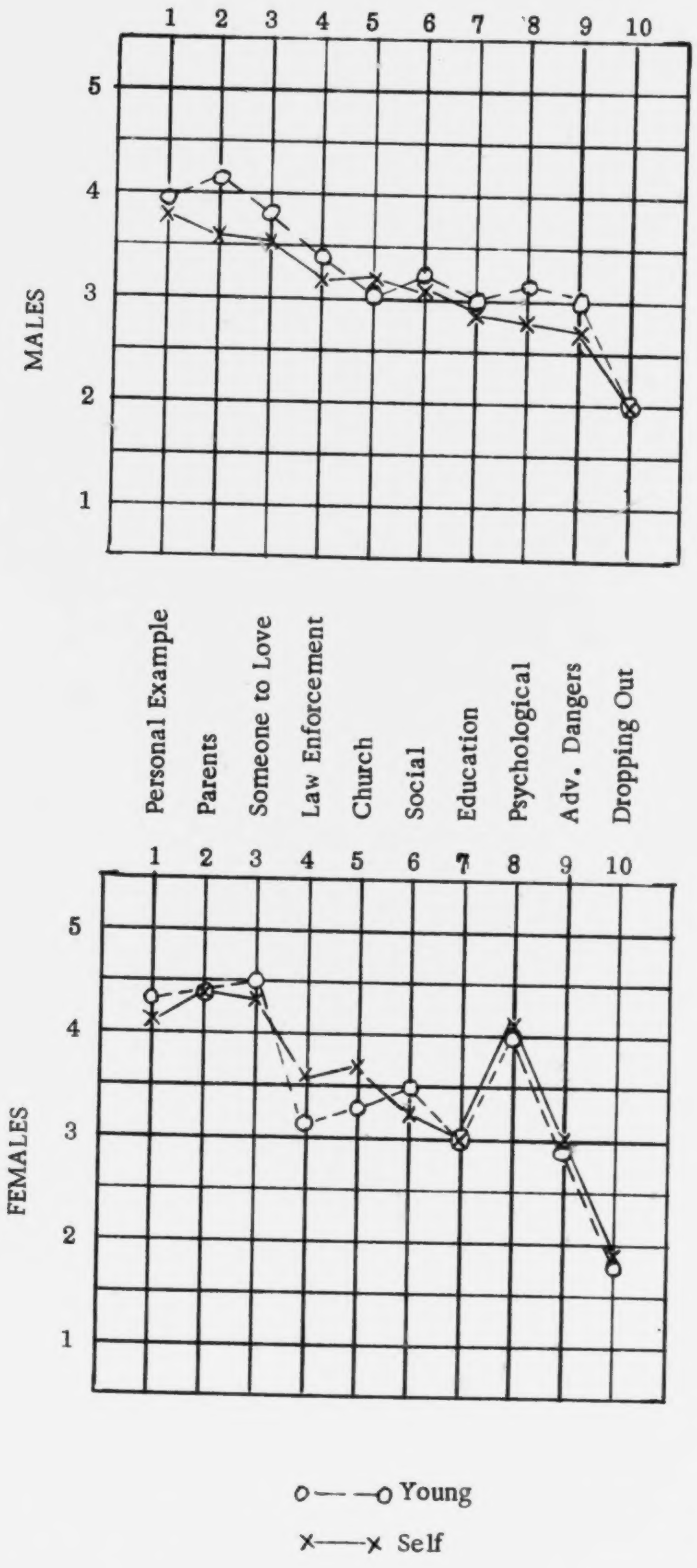


FIGURE 10

Means - Effect Sex - Coronado Adults

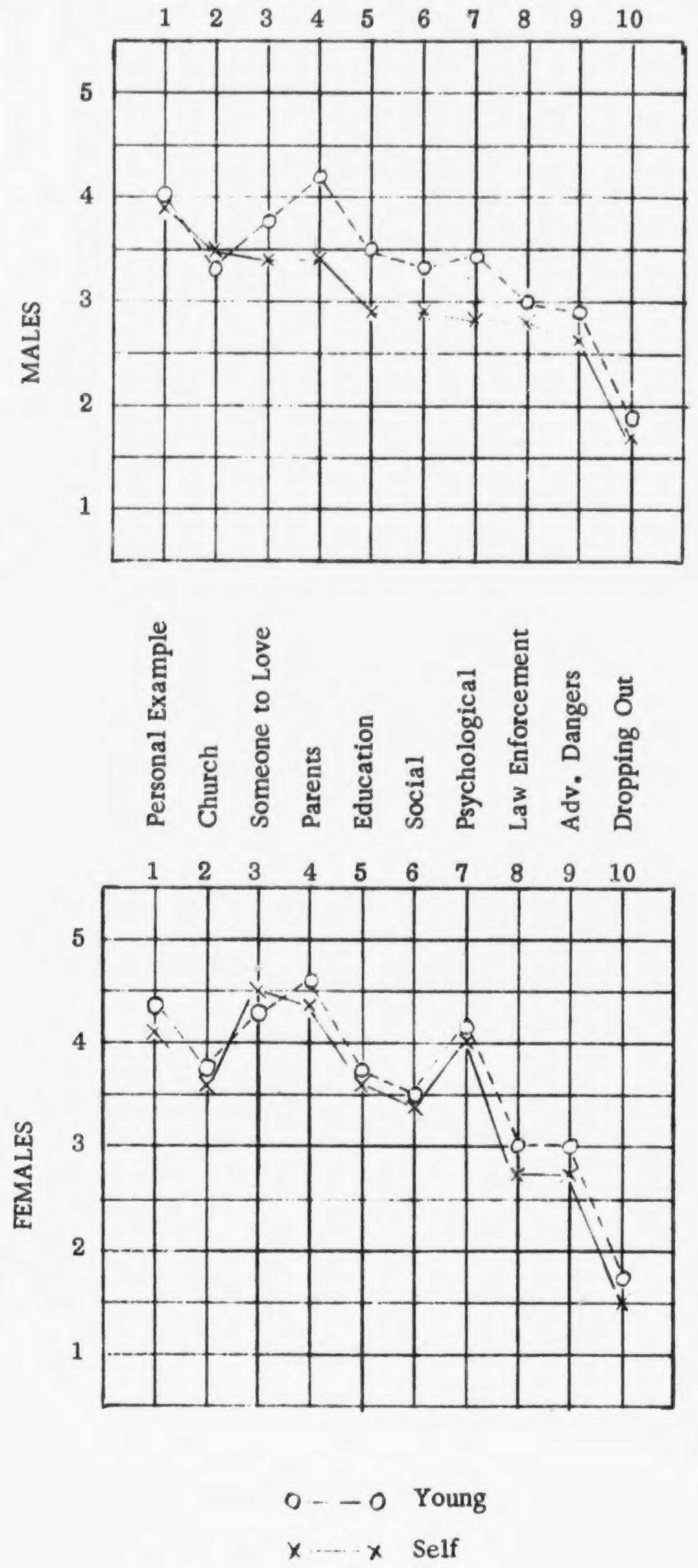


FIGURE 11

Means - Effect Drugs - Coronado Adults

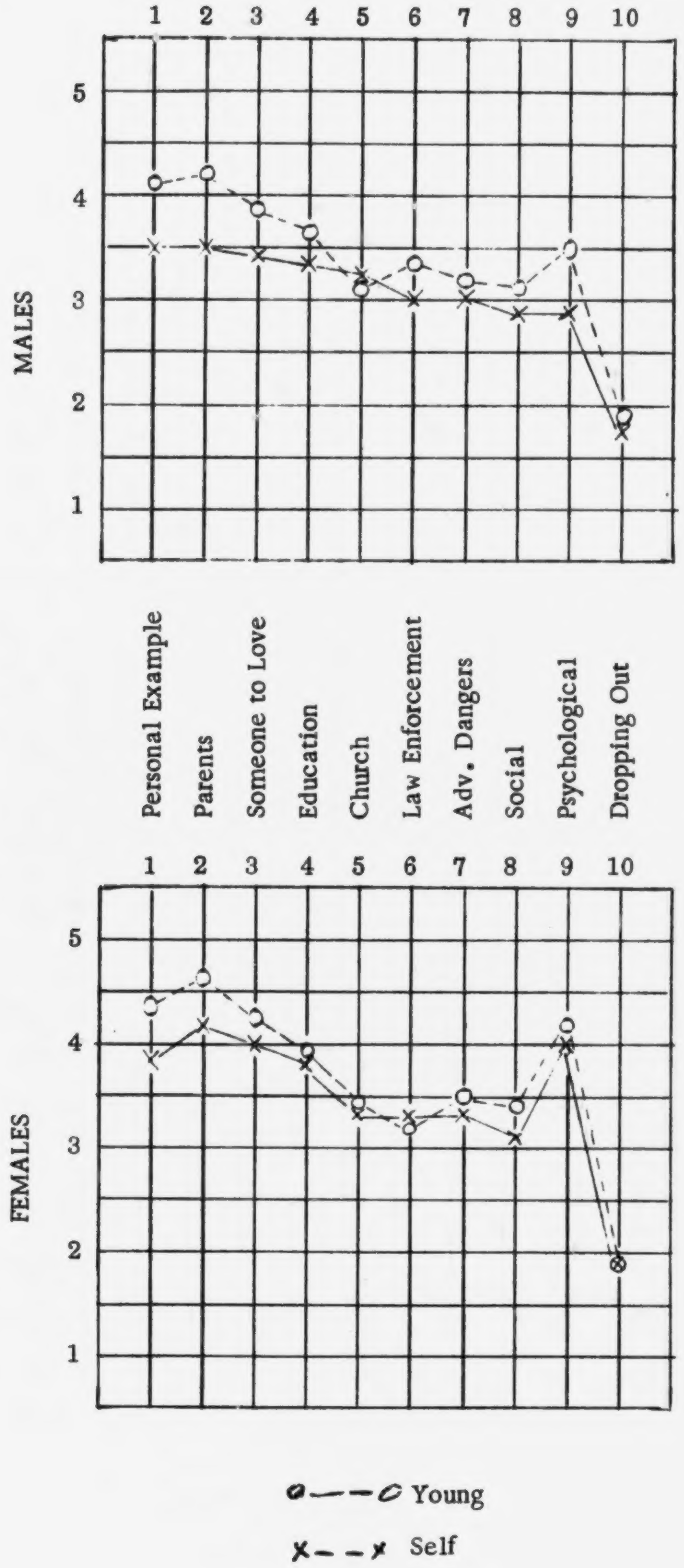


FIGURE 12

Means - Effect Cheating - Coronado Adults

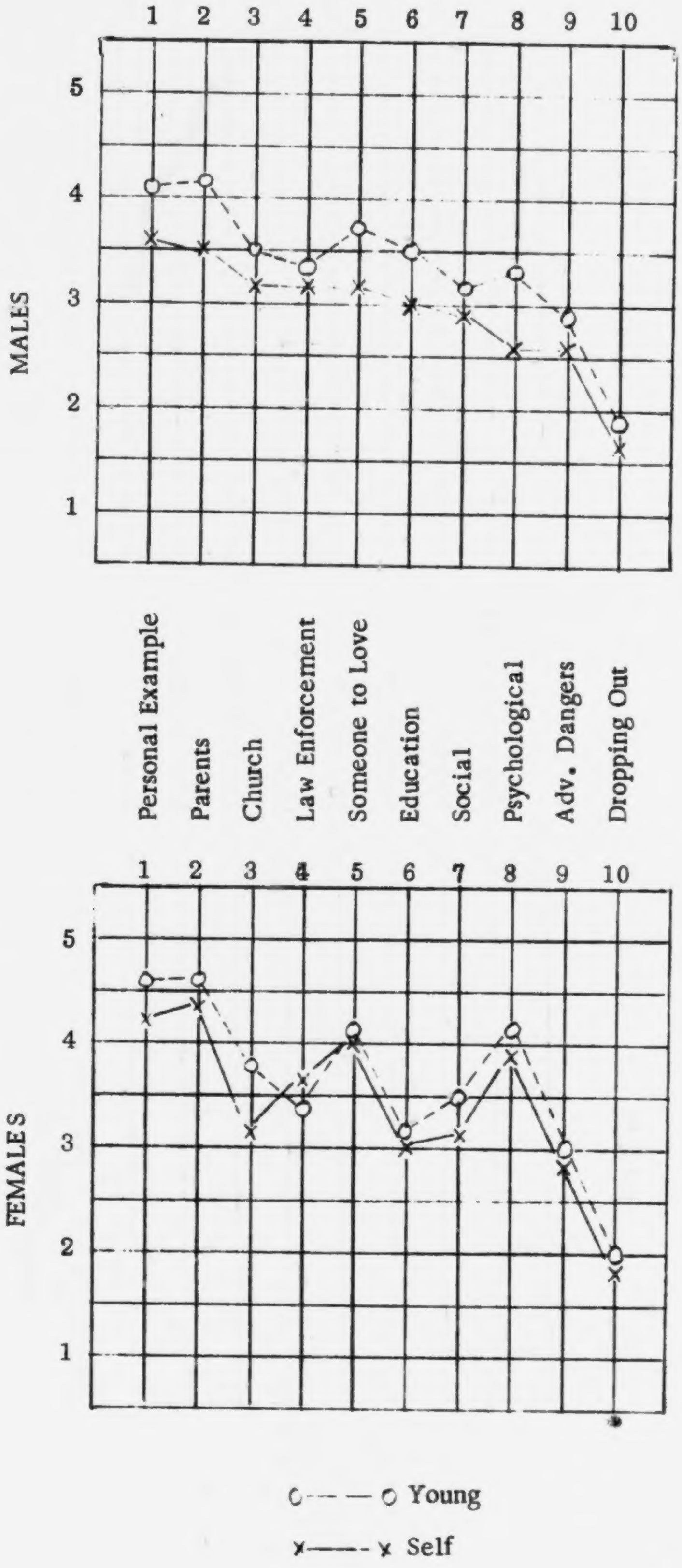


FIGURE 13

Means - Injury Risk - Male and Female - Coronado Adults

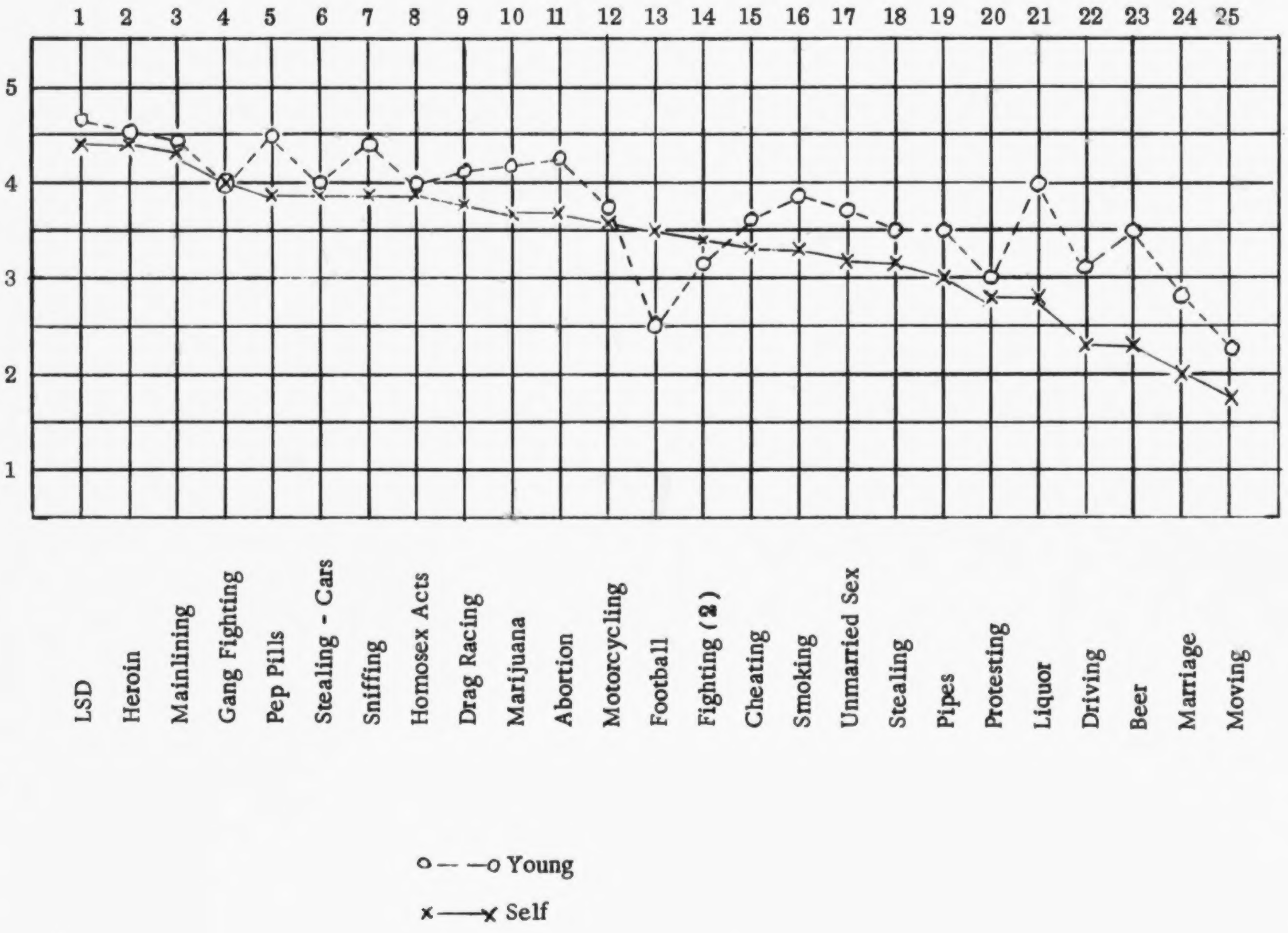


FIGURE 14

Means - Disapproval Risk - Male and Female - Coronado Adults

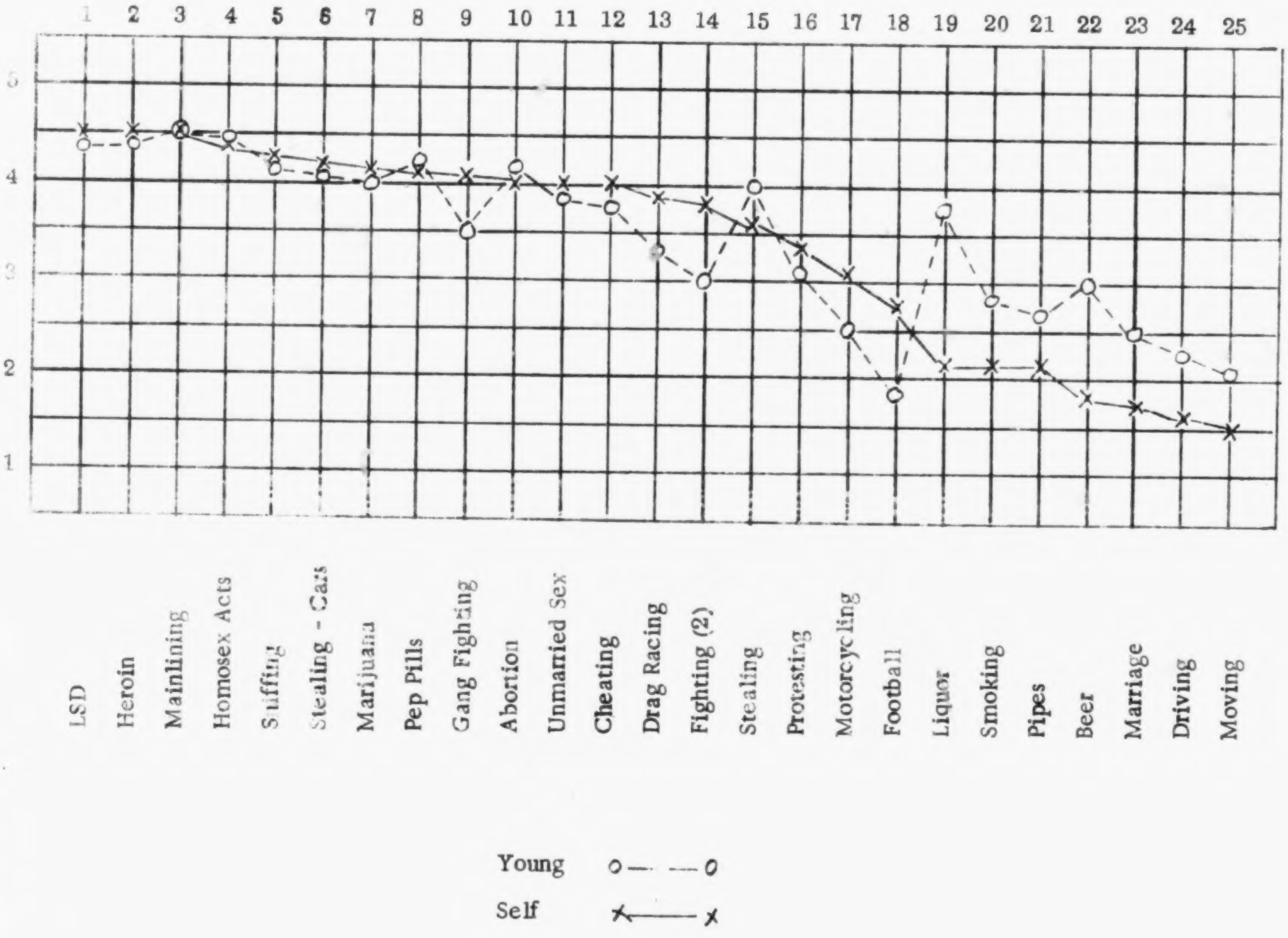


FIGURE 15

Means - Problem Solving Gain - Male and Female - Coronado Adults

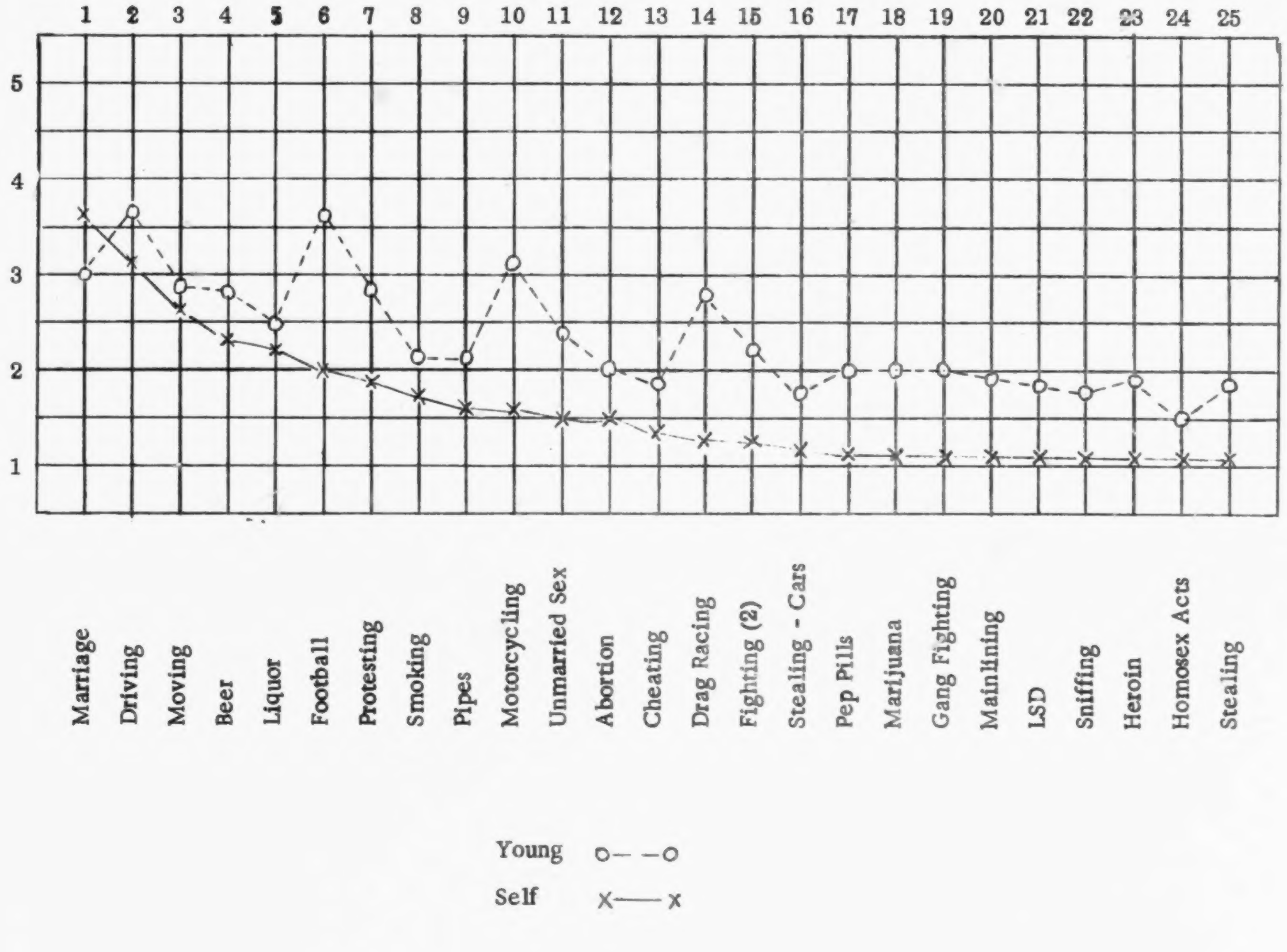


FIGURE 16

Means - Pleasure Gain - Male and Female - Coronado Adults

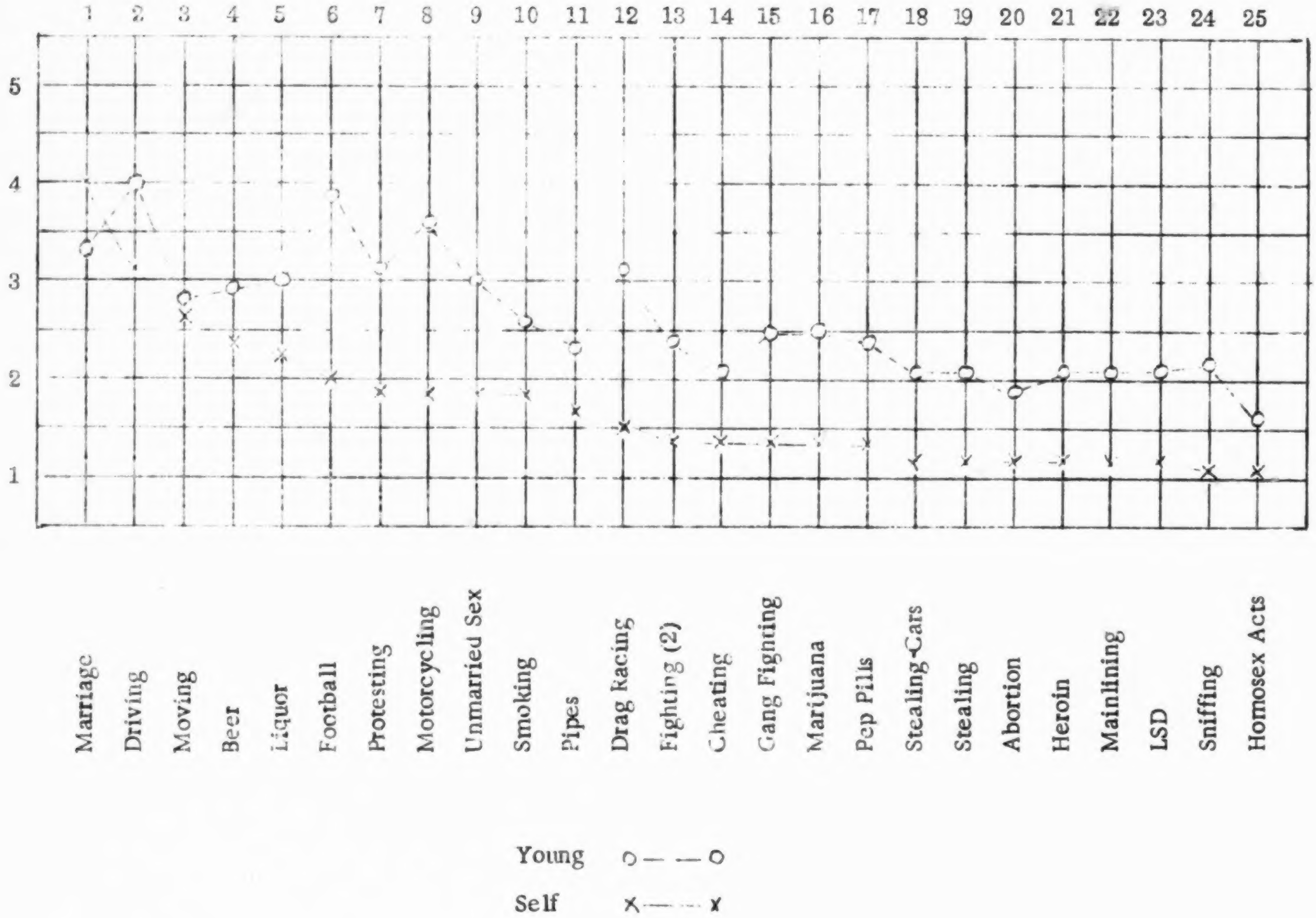


FIGURE 17

Means - Effect Smoking - Male and Female - Coronado Adults

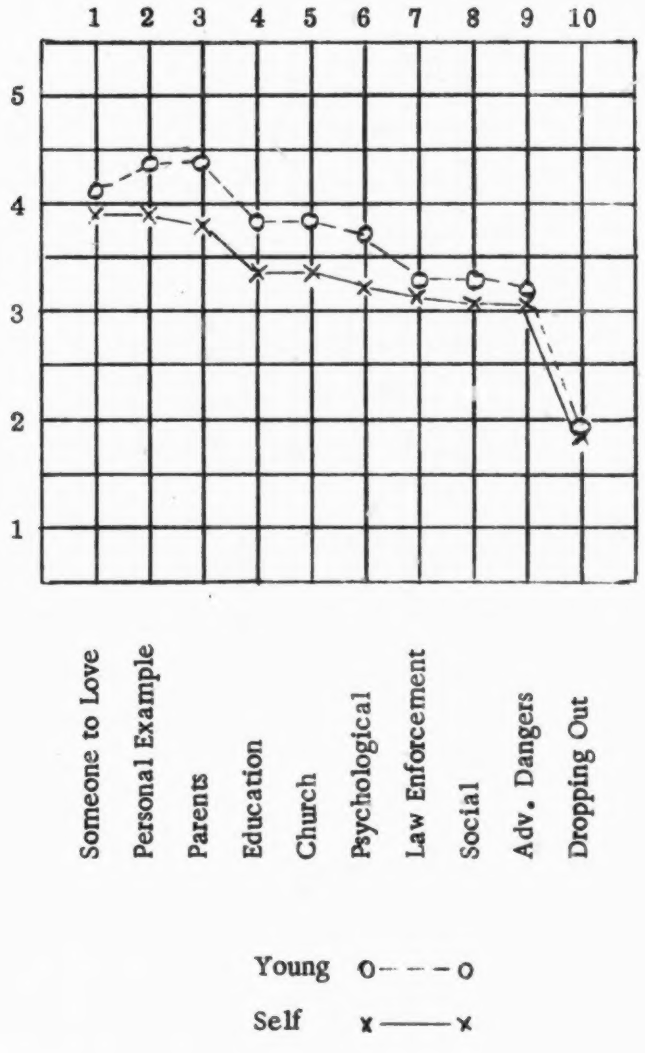


FIGURE 18

Means - Effect Racing - Male and Female - Coronado Adults

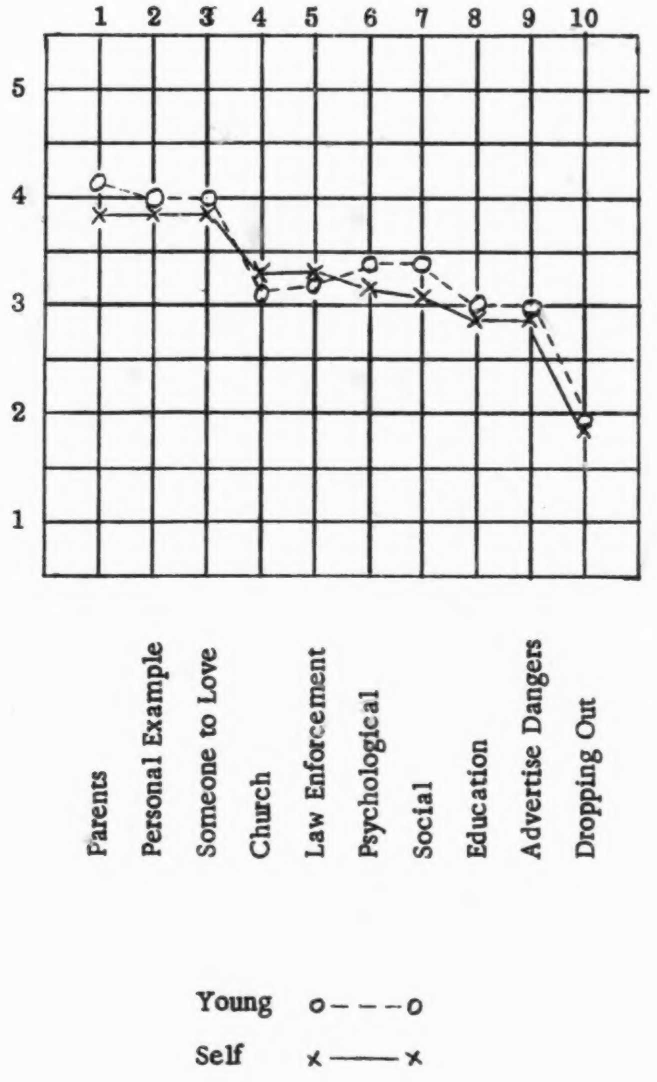


FIGURE 19

Means - Effect Sex - Male and Female - Coronado Adults

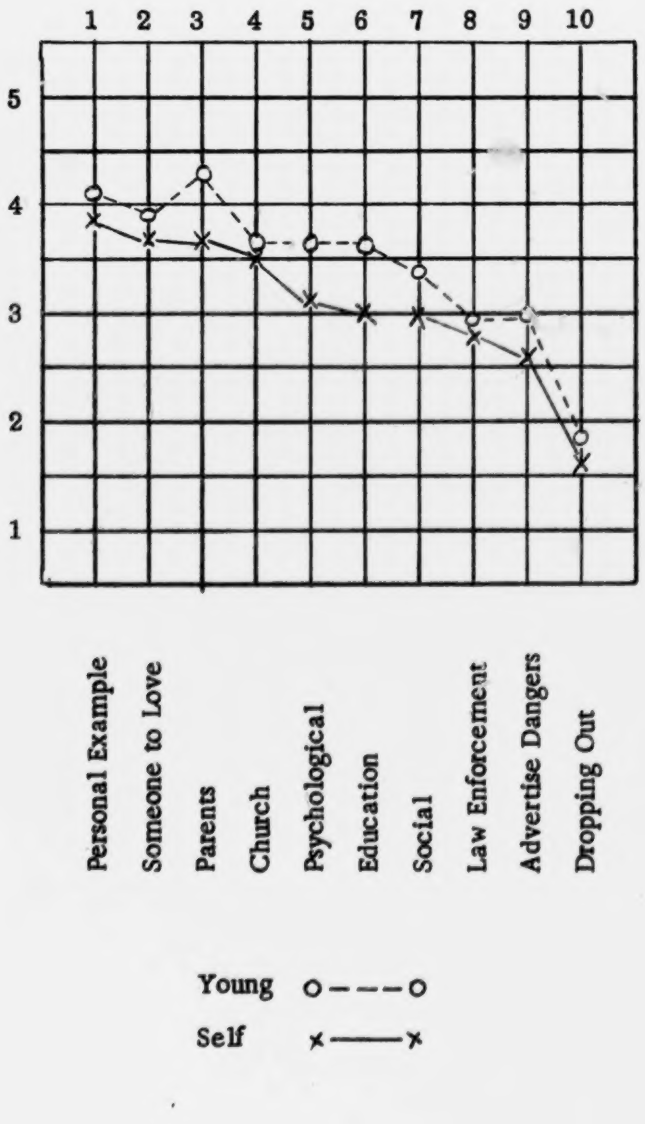


FIGURE 20

Means - Effect Drugs - Male and Female - Coronado Adults

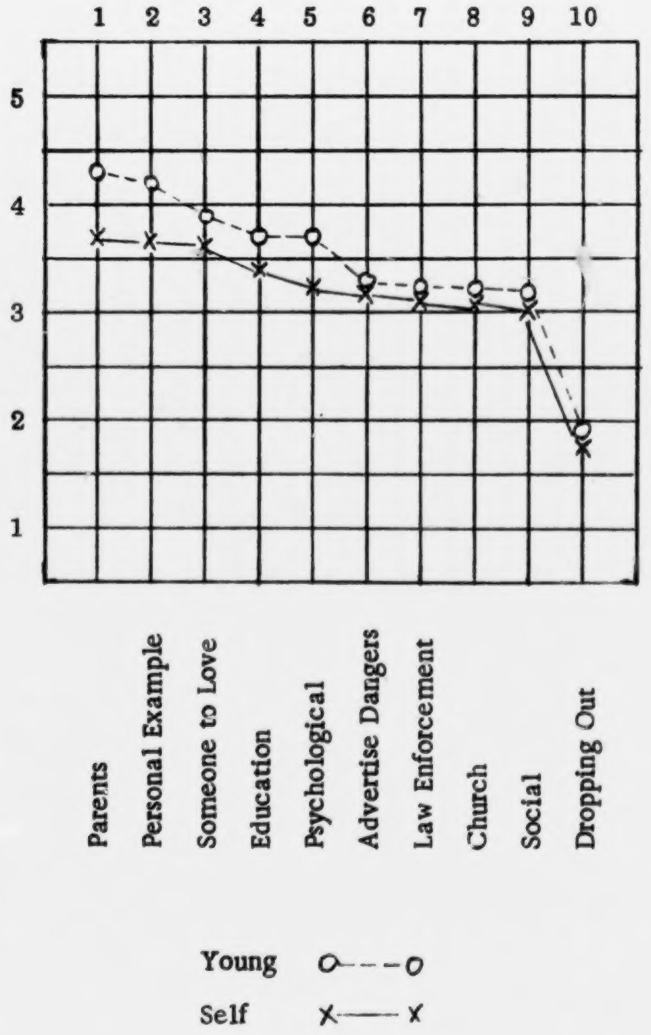
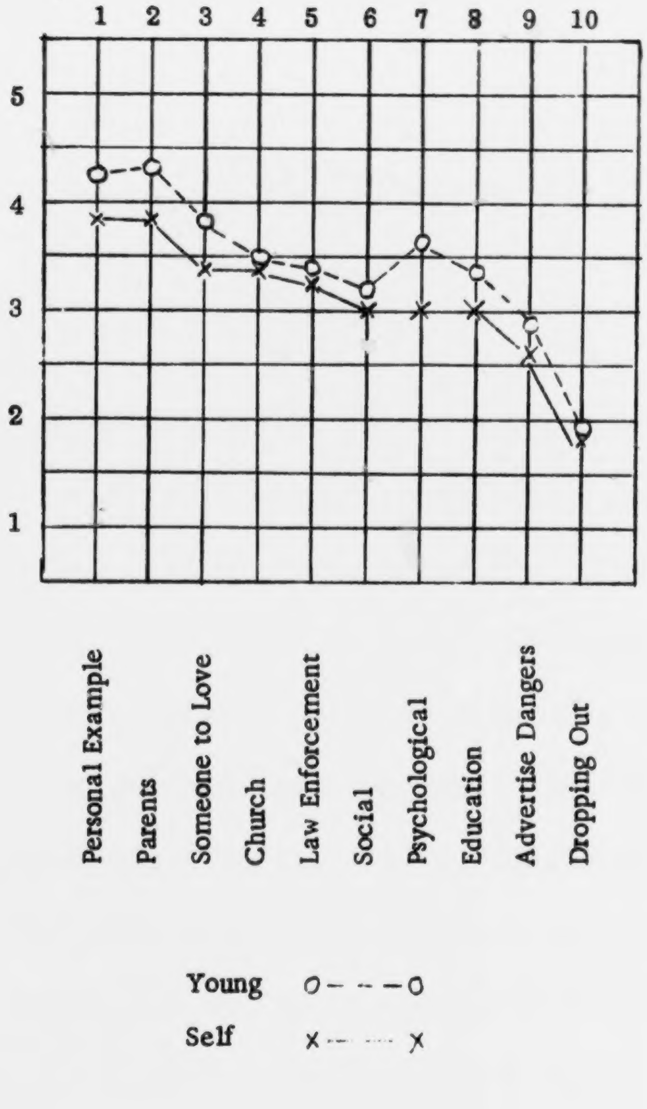


FIGURE 21

Means - Effect Cheating - Male and Female - Coronado Adults



and is similar to that for the first four samples. Due to the very large number of ratings correlations have not been calculated for every case. Table 7 gives the rank-order correlations between the sets of means for all of the male risk and gain ratings and a few of the corresponding female ratings.

Table 8 shows a few example calculations comparing male and female ratings and action ratings. The general pattern continues to show good agreement.

C. MEANS OF THE SCHOOL SAMPLES (6 AND 7)

METHOD

Sample: A group of Junior High (7th Grade, Sample 6) and Senior High School (11th Grade, Sample 7) students were obtained from the Coronado schools. Although participation was voluntary and written parent approval required (Board of Education policy) nearly all students who were selected at random from the classes participated and excellent cooperation was evident from both the teachers and students in these classes. With the exception of a deliberate attempt to get a balance between the sexes, the school samples were selected to be as representative as possible of these age groups in the Coronado Schools. There were 58 boys and 54 girls in the Junior High group and 60 boys and 53 girls in the Senior High group.

Procedure: The school groups were given the RTAQ (Revised Secondary Form) in their classrooms by project staff personnel. The instructions were presented aloud while the students read them from

TABLE 7.

Rank Order Correlations Between Means - Coronado Adults

			MALES							
			RISKS				GAINS			
			I - S	I - Y	D - S	D - Y	PS - S	PS - Y	P - S	P - Y
FEMALES	RISKS	I - S	---	890	917	749	-772	-666	-770	-583
		I - Y	896	---	763	845	-540	-583	-659	-500
		D - S	---	---	---	898	-843	-818	-878	-827
		D - Y	---	---	---	---	-749	-766	-827	-773
	GAINS	PS - S	-758	---	---	---	---	839	913	768
		PS - Y	---	---	---	---	---	---	872	875
		P - S	---	---	---	---	---	---	---	886
		D - Y	---	-570	---	---	711	---	---	---

NOTE: Only a few sample values were computed for the females.

I = Injury
D = Disapproval
PS = Problem Solving

P = Pleasure
S = Self
Y = Young

TABLE 7. (Con't.)

Example Correlations Between Rating Means for Coronado Adults

Risk and Gains

(Male vs. Females)

Injury Self = .942
Injury Young = .934
Disapproval Self = .961

Male Injury Self vs. Female Disapproval Self = .866
Disapproval Young = .966
Pleasure Gain Young = .907

Actions

Males Smoking Self vs. Young = .845
Males Smoking Self vs. Racing Self = .494
Males Smoking Self vs. Female Smoking Self = .827

TABLE 8.

Example Rank Order Correlations Between Mean Ratings Senior High Females - Coronado, 1969

	RISK RATINGS				GAIN RATINGS	
Risk Rating	Injury	Loss of Self Respect	Loss of Friends	Law	Adult Feeling	Gain Friends
Injury	---	.900	.786	.815	-.712	-.732
Loss of Self Respect	---	---	.951	.852	nc	nc
Loss of Friends	---	---	---	.822	nc	-.735
Law	---	---	---	---	nc	nc

NOTE: nc = not calculated

TABLE 9.

Example Rank Order Correlations Between Various Mean Ratings School Sample - Coronado, 1969

SENIOR HIGH	Female Action - Smoking vs. Drugs	r = .764
	Female Action - Smoking vs. Sex	r = .721
	Female Action - Smoking vs. Cheating	r = .661
Senior High Girls vs. Senior High Boys, Injury Risk		r = .914
Senior High Girls vs. Junior High Girls, Injury Risk		r = .874
Senior High Girls vs. Junior High Boys, Loss of Friends Risk		r = .692
Senior High Girls Adult Feeling Gain vs. Junior High Boys Good Feeling Gain		r = .733
Senior High Boys vs. Junior High Boys, Injury Risk,		r = .826

the RTAQ. Questions were again answered on an individual basis. Answers were punched directly onto IBM Port-a-punch cards using plastic styli and sponge pads.

Analysis: The school groups had reasonable distributions on all items and only the religion item needed to be reduced into two categories. Means, standard deviations, etc., were calculated as usual.

RESULTS

The means for all of the ratings in the secondary school samples are shown in Figures 22-34. In each case the behaviors are listed in their rank-order for the junior high boys. A smooth descending line would indicate perfect agreement between the girls with the mean ratings of the junior high boys. Irregularities indicate differences in order of the girls means from that of the junior high boys. The earlier results have shown that the order of the means ratings of these behaviors is quite stable (relatively unchanging) over age and sex groups and types of risk or gain. The school data confirm the previous results. Correlations between the mean ratings range from .650 to .950. Table 8 shows an example set of correlations for the senior high girls' rankings of risk and two cases of gain vs. risk ratings. In general, ratings of risk are negatively correlated with ratings of gain (the higher the risk rating the lower the gain rating).

A few example comparisons between various types of ratings over groups of subjects are presented in Table 9. These correlations were selected to be representative of their type. As can be seen, the consistency of these ratings is maintained over ages and groups.

FIGURE 22

Means - Injury Risk - Coronado School Samples

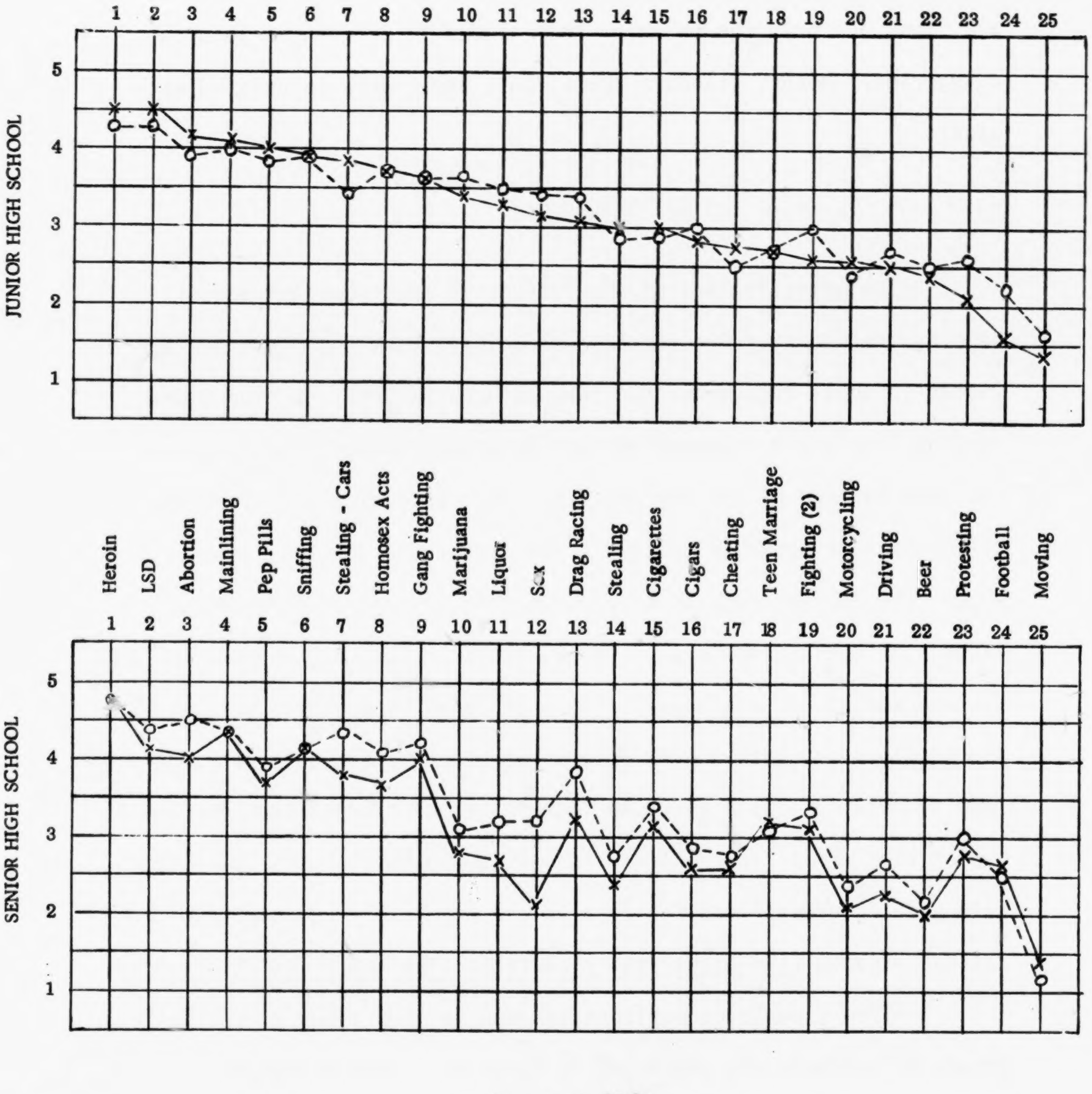


FIGURE 23

Means - Self Respect Risk - Coronado School Samples

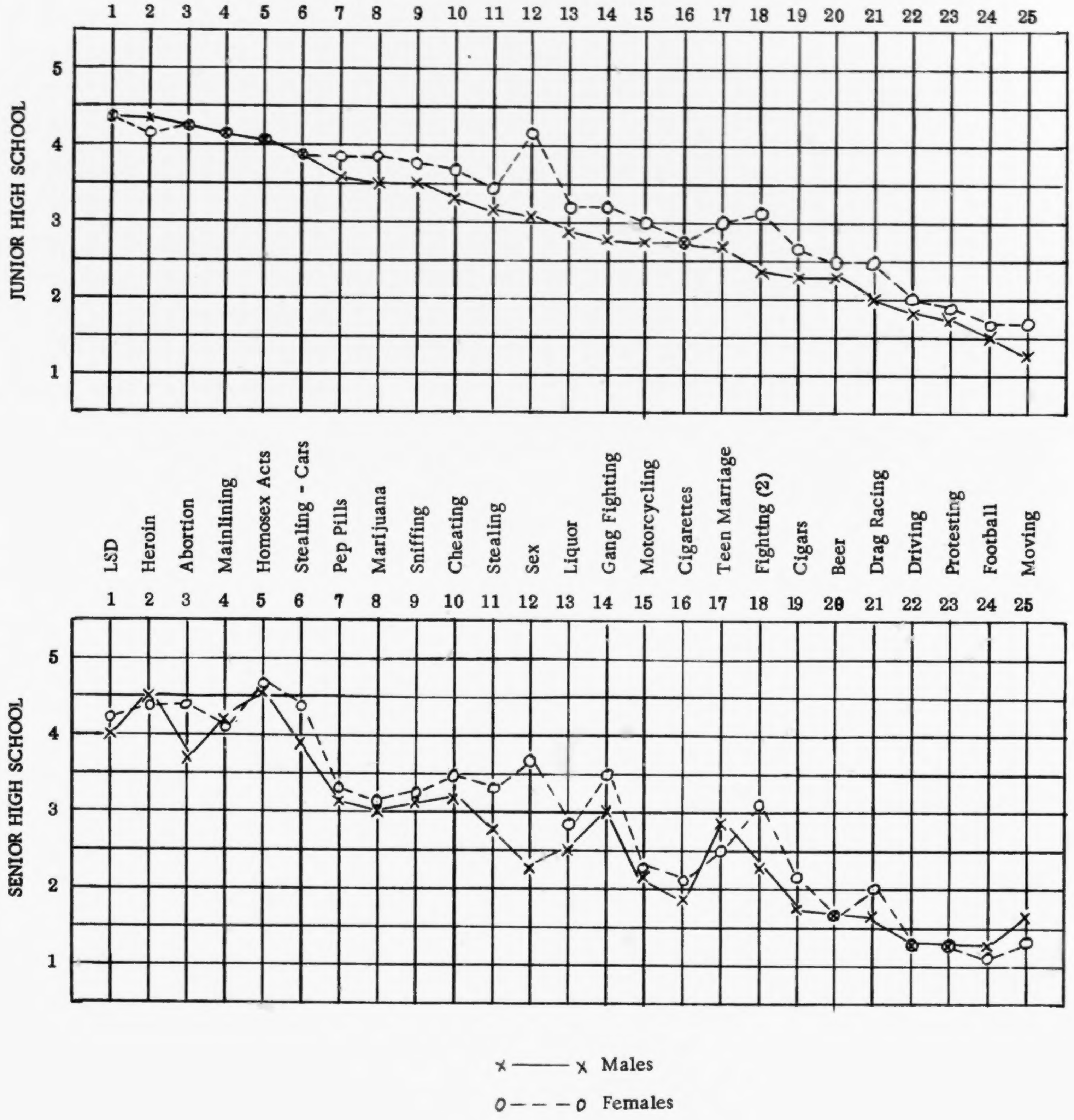


FIGURE 24

Means - Loss of Friends Risk - Coronado School Samples

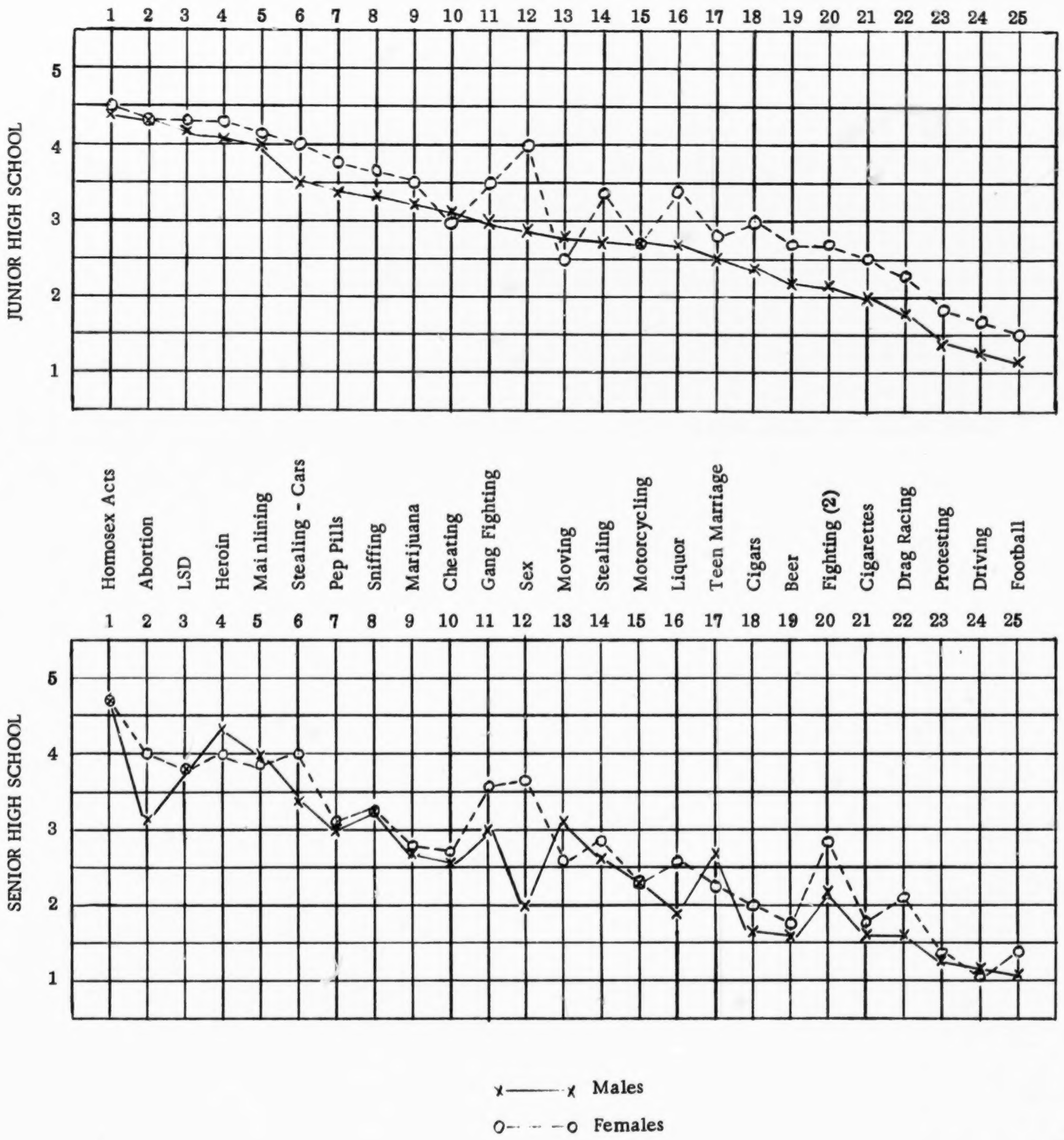


FIGURE 25

Means - Law Risk - Coronado School Samples

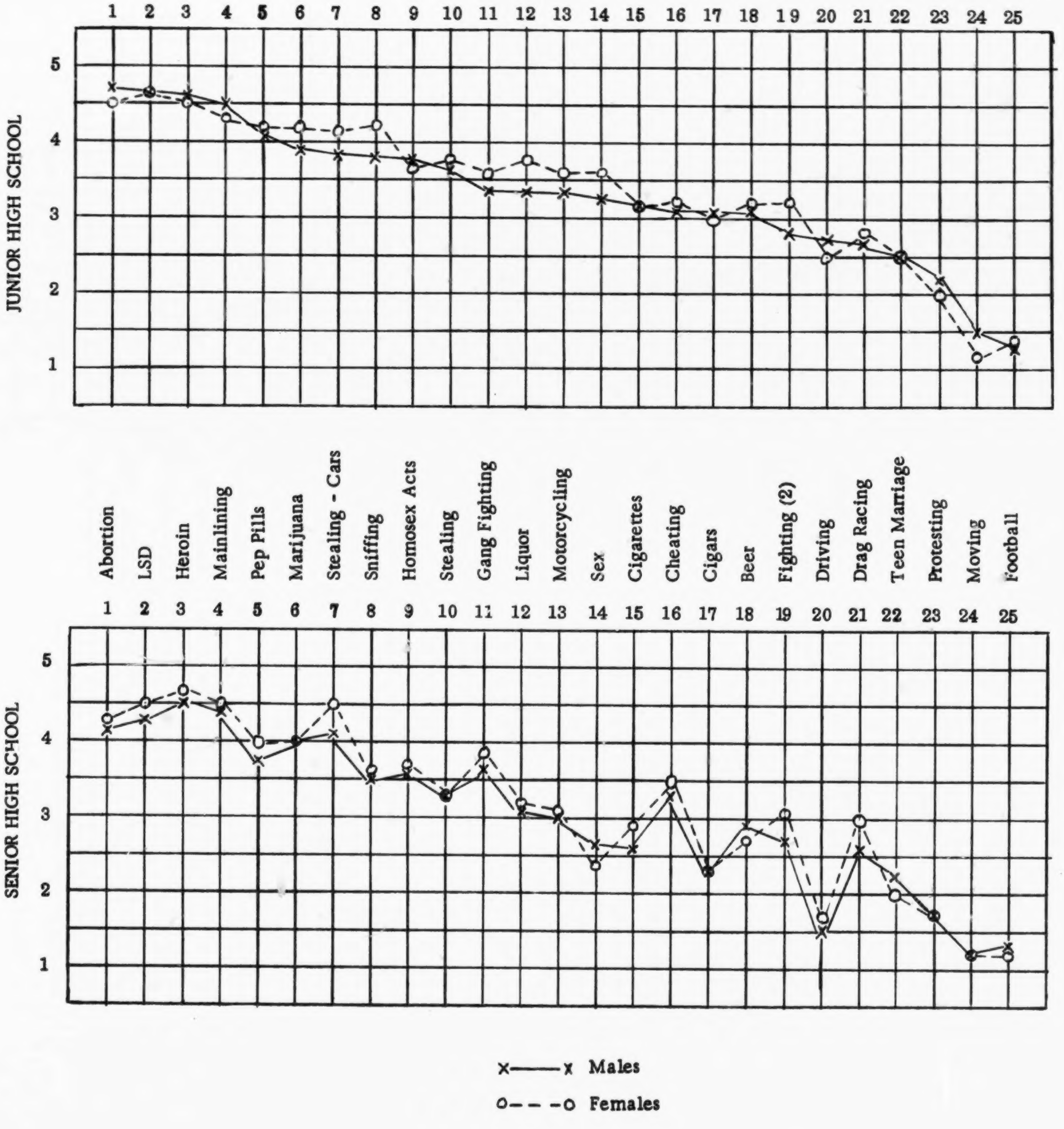


FIGURE 26

Means - Adult Feeling Gain - Coronado School Samples

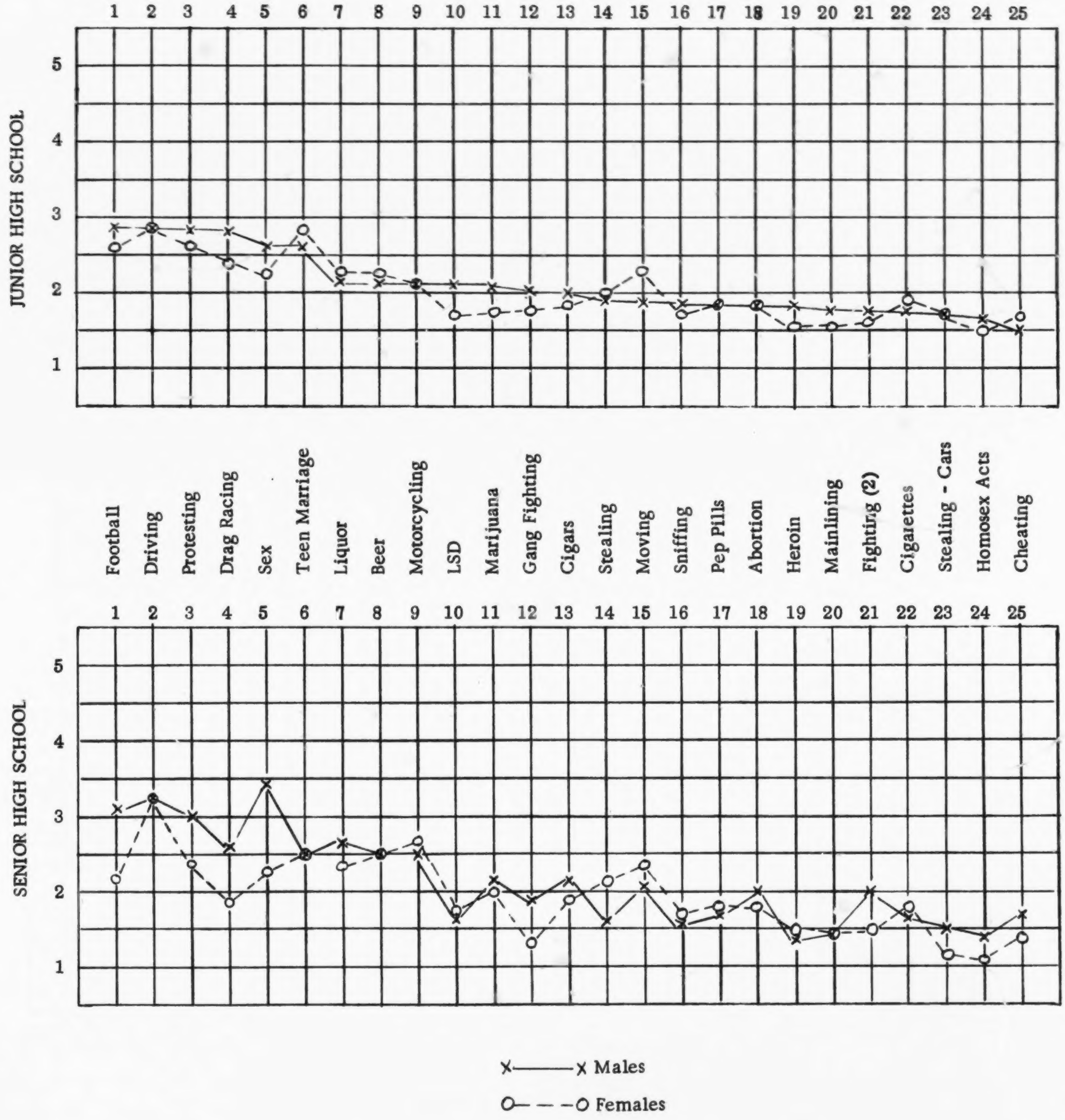


FIGURE 27

Means - Friends Gain - Coronado School Samples

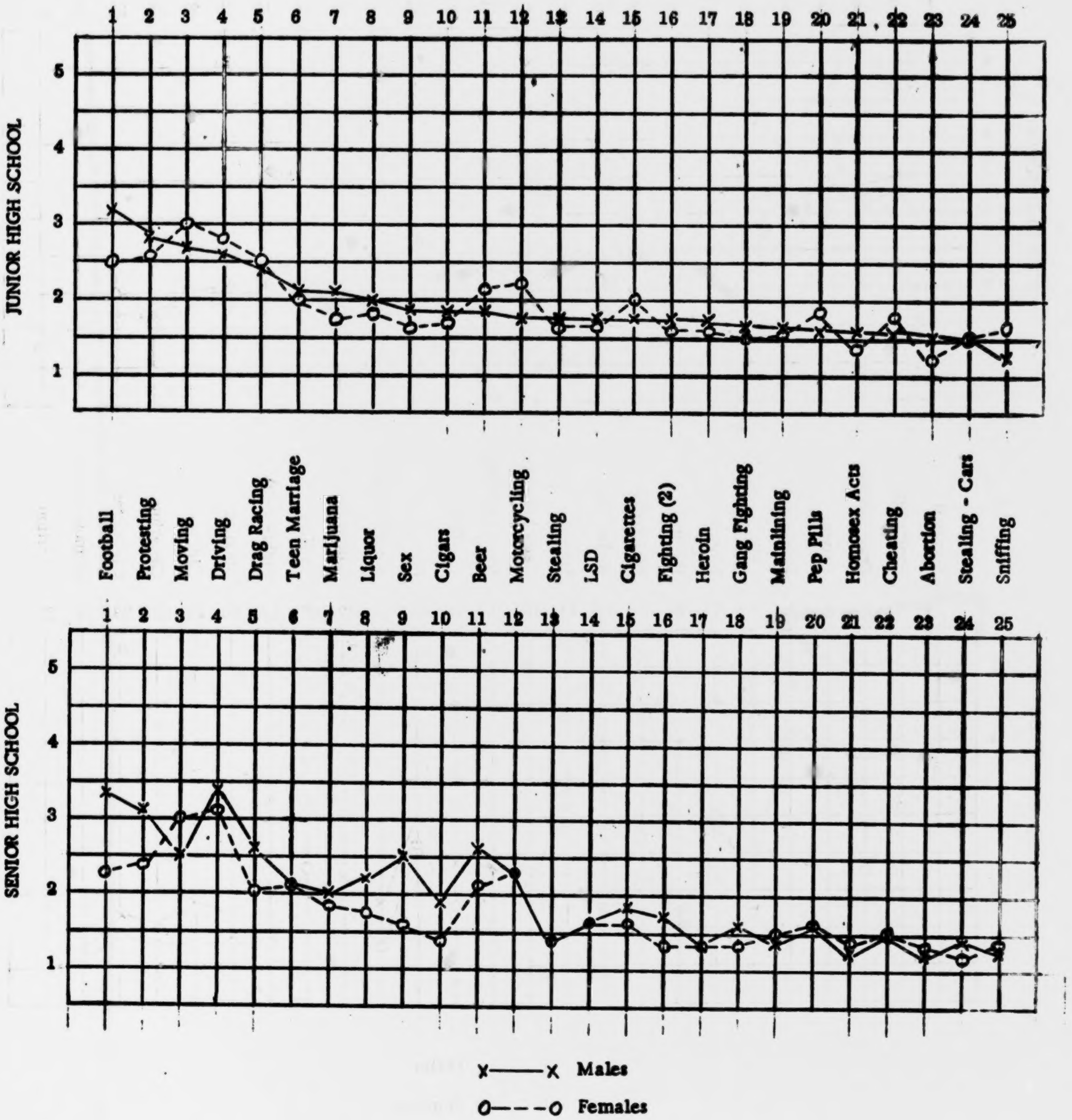


FIGURE 28

Means - Excitement Gain - Coronado School Samples

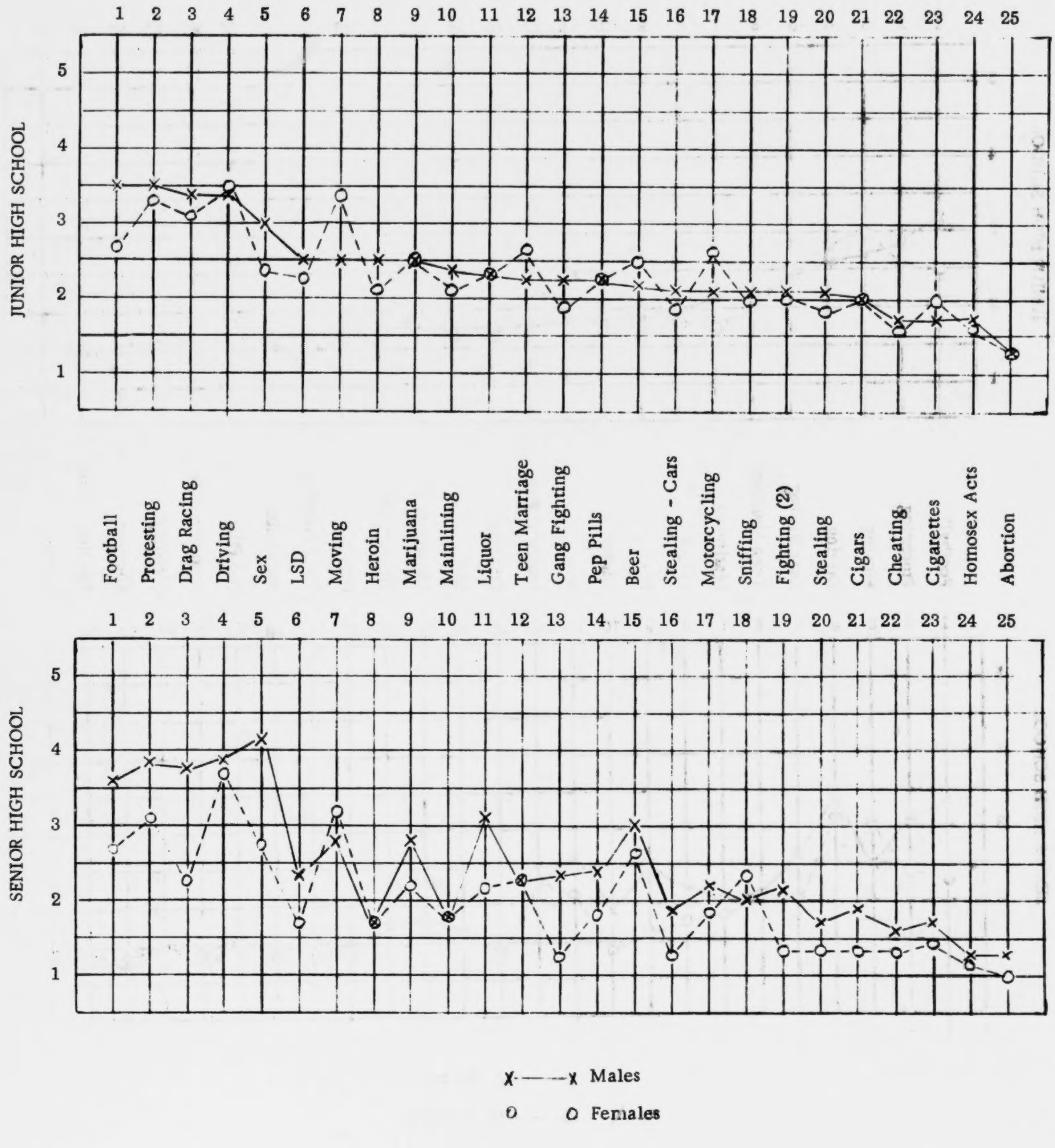


FIGURE 29

Means - Good Feeling Gain - Coronado School Samples

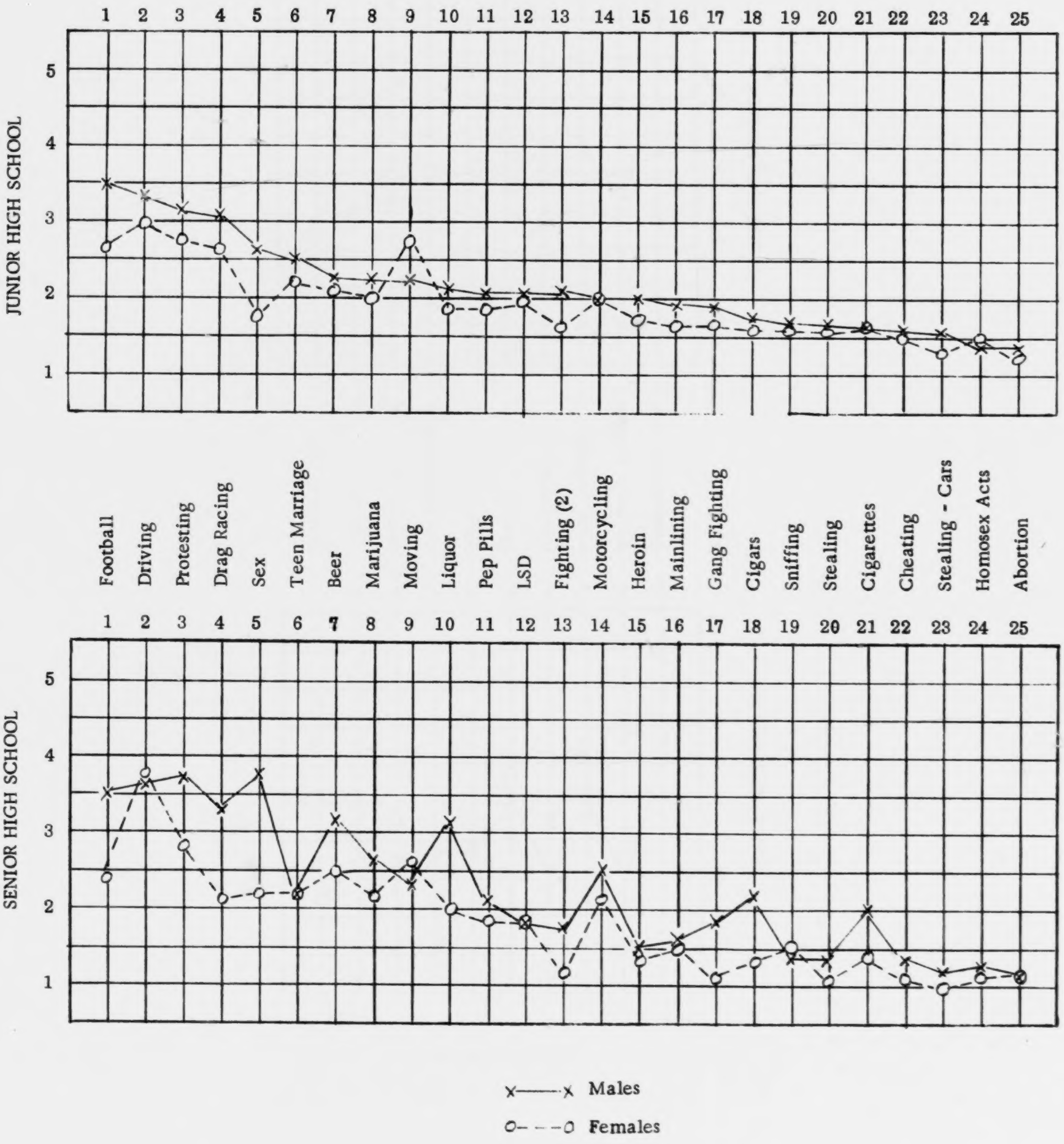


FIGURE 30

Means - Action Smoking - Coronado School Samples

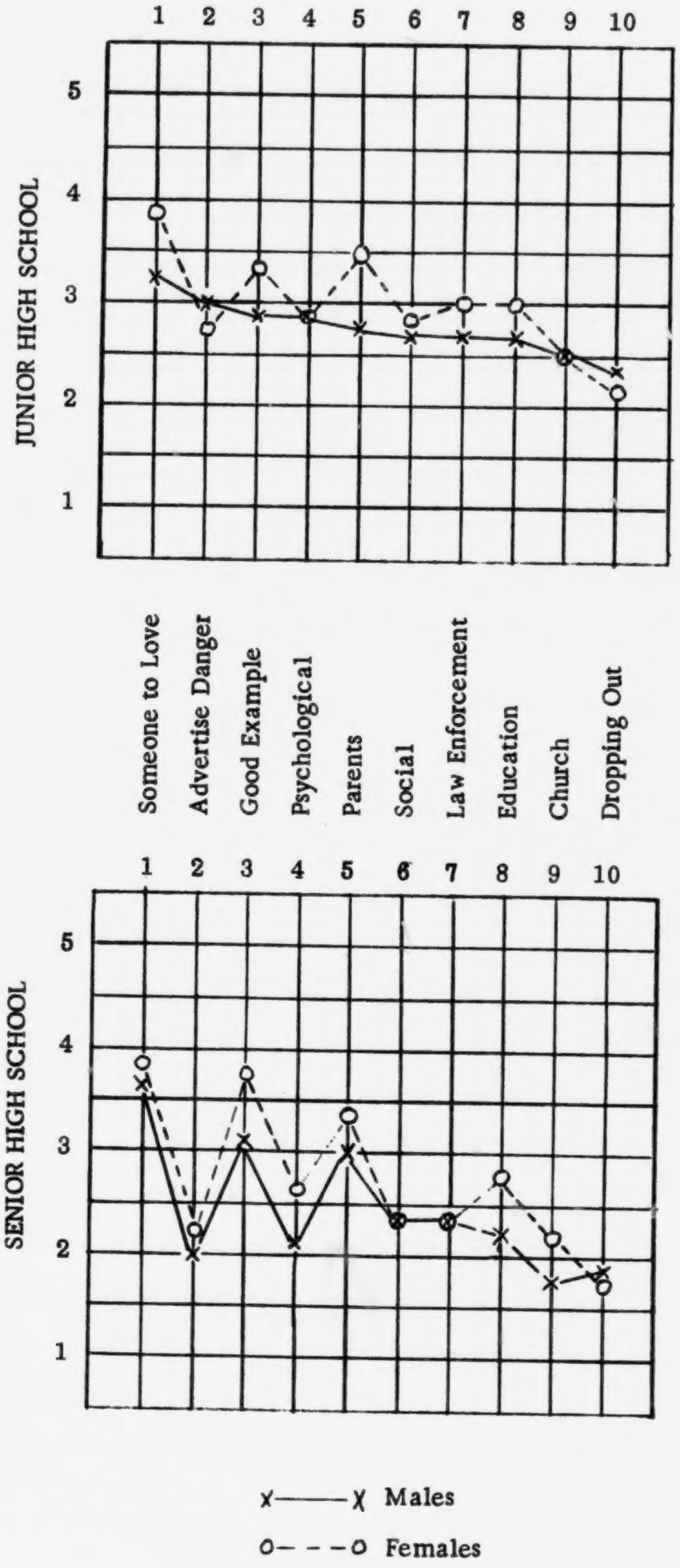


FIGURE 31

Means - Action Racing - Coronado School Samples

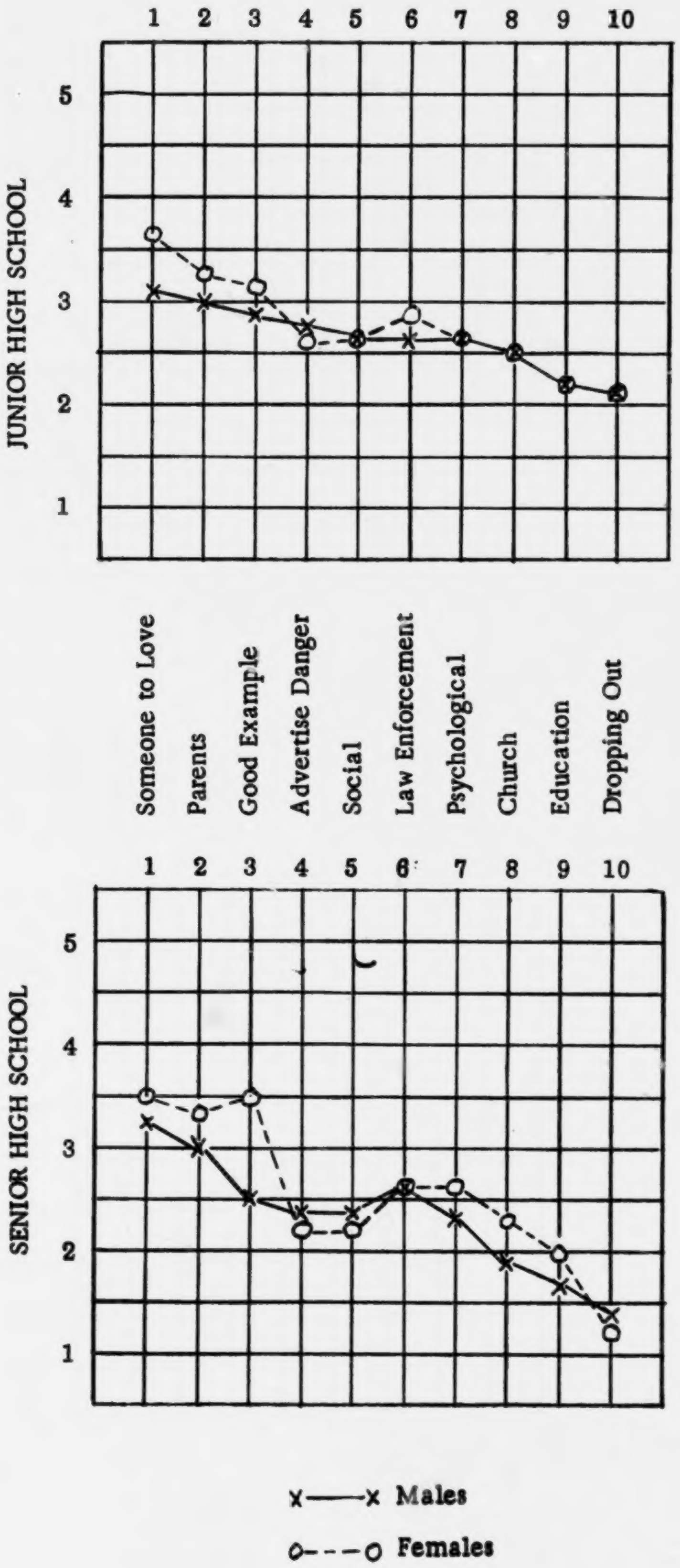


FIGURE 32

Means - Action Sex - Coronado School Samples

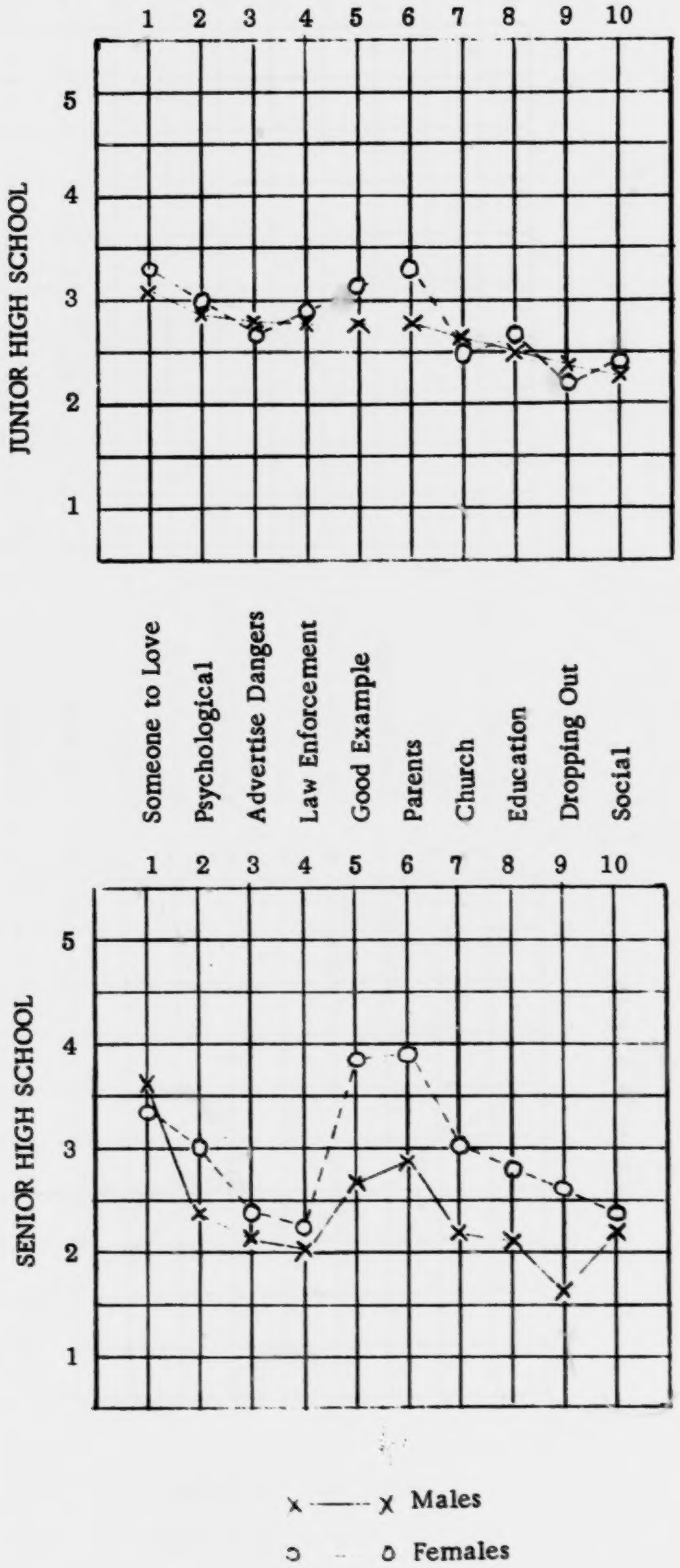


FIGURE 33

Means - Action Drugs - Coronado School Samples

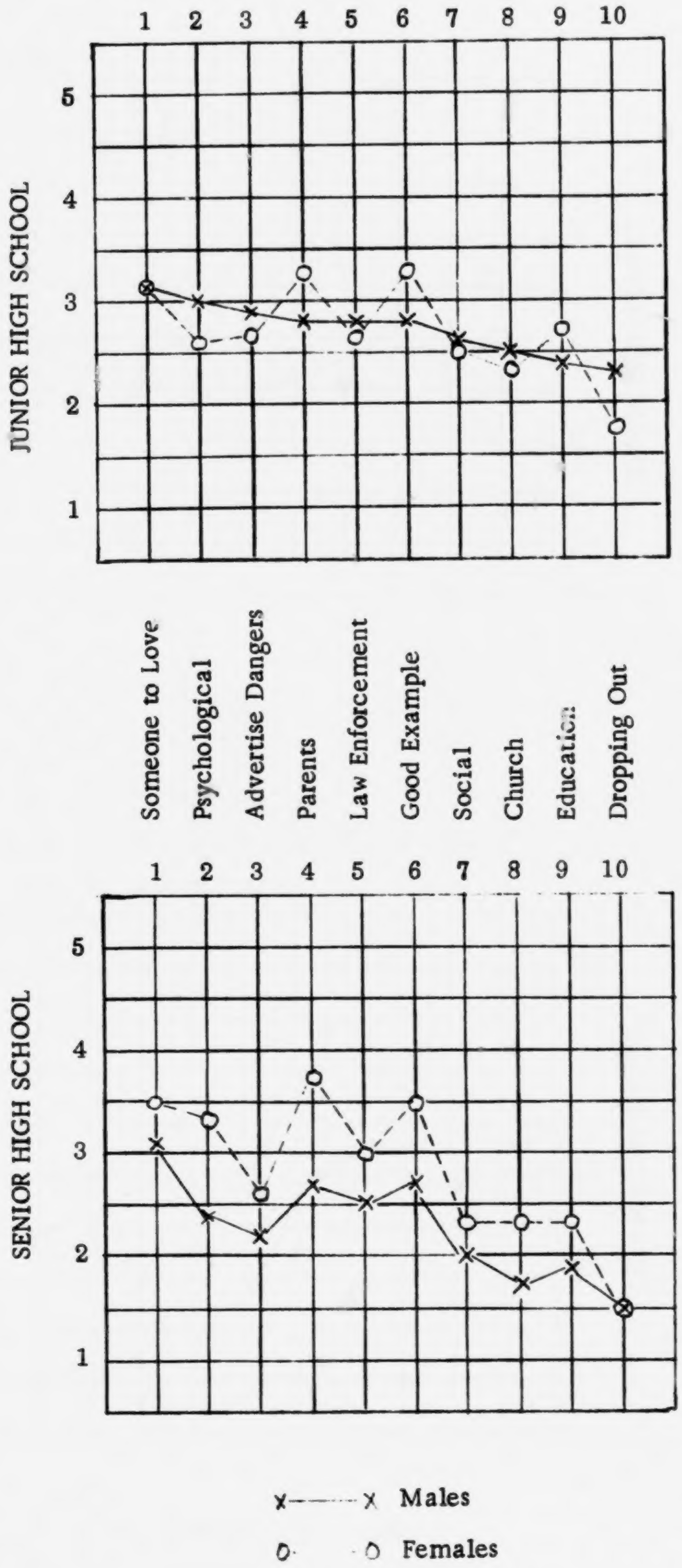
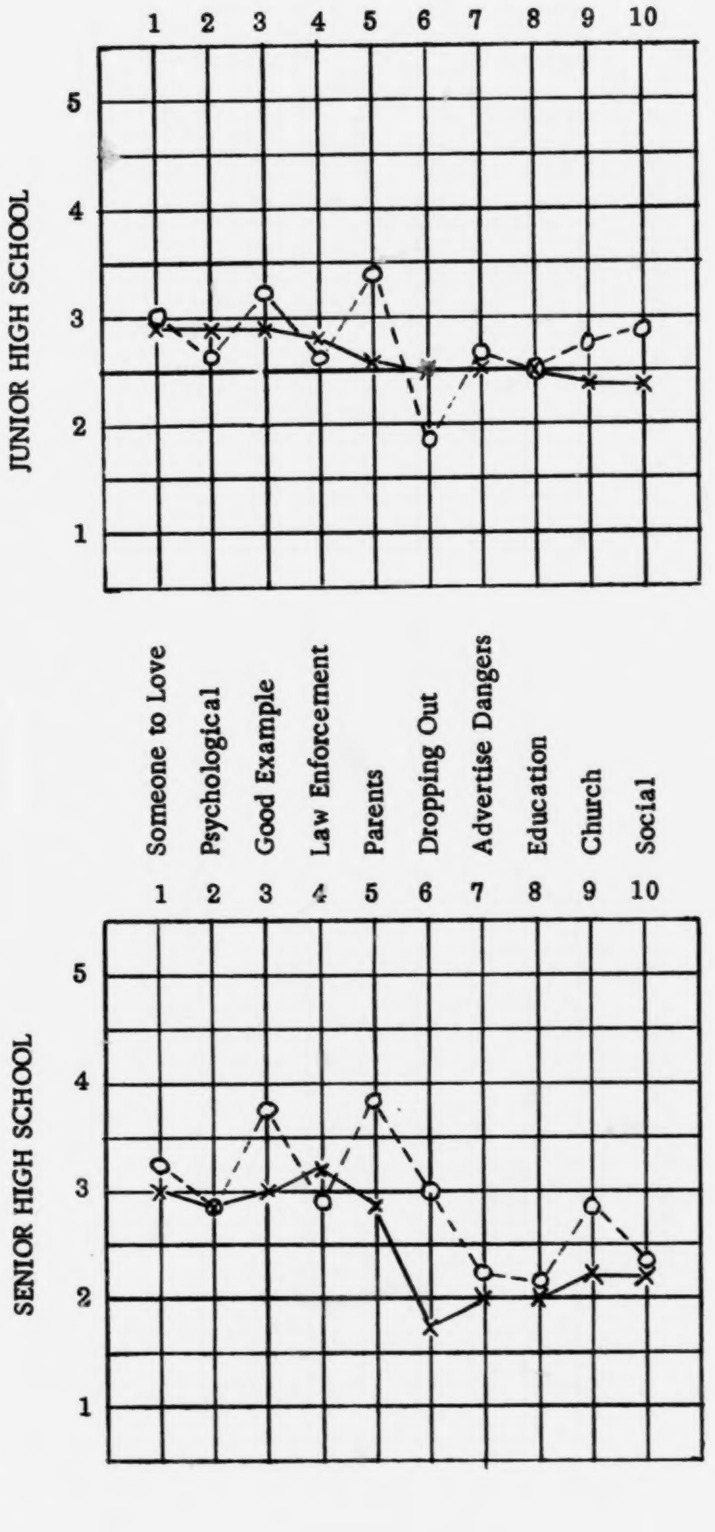


FIGURE 34

Means - Action Cheating - Coronado School Samples



Earlier data on Coronado adults provides a rating by adult males on the injury risk to young people of the various behaviors. This set of adult ratings is so similar to the ratings made by the junior high males themselves that it had a correlation of .916. These two groups of males are as widely separated in age as can be obtained in this data and their means still form highly comparable patterns. All of the correlations under discussion are highly reliable statistically.

The "action" ratings are less consistent, with correlations in the .60 to .70 range. This finding also confirms the earlier ones that groups tend to disagree more on what to do about a problem than on what the problem is.

DISCUSSION

All of the results to date indicate that for most practical purposes the earliest RTAQ forms which used a single or at best two types of risk and gain ratings would be sufficient. Indeed, a question could quite legitimately be raised about what such highly consistent sets of data signify. Are we really just measuring some sort of general response bias or are the subjects giving valid, thoughtful responses to the questions? An adequate answer to this question requires some depth of technical discussion and the patience of the reader is requested.

In the first place, the sets of means represent group averages and not scores of individuals. Group averages usually tend to be more stable than individual scores. Secondly, the behaviors to be rated were carefully selected to represent a wide range from very risky to very little risk. Such a wide range helps to produce higher correlations, but *a real relationship must be present before a wide range of values can be*. If the groups studied did not share a common perception of the relative riskiness of the behaviors in some detail and over the entire range, correlations of the order of .90 would not be possible. In the third place, it is possible for groups to order the behaviors in the same way and still rate the behaviors higher or lower than another group does. For example, Figures 22, 23 and 24 show that there is a general tendency for senior high girls to rate most behaviors as being more risky than do the senior high boys. Both groups, however, order the behaviors in a very similar way.

Finally, there *are* differences between the orders of the means and these differences make very good sense. Even a correlation of .90 leaves room for about 20% disagreement between two sets of orders. As an example, in Figures 23 and 24 the girls see sexual intercourse as having relatively higher risk than the males for "loss of self respect" and "loss of friends." On the "injury" and "law" risk ratings this difference is much reduced and the senior high girls actually see somewhat less risk from the law for sexual behavior than the boys do (see Figures 22 and 25).

These differences in attitudes between boys and girls are very much to be expected and indicate that the subjects *were* giving thoughtful, discriminating responses. The relatively low correlations between the "action" ratings also show that group differences in order often do occur when they are expected and that high agreement or similarity when it is obtained is not just an artifact. Other examples of this include generally higher agreement between groups on the same type of rating (e.g., Injury Risk) than between different types of ratings (e.g., Injury and Self Respect risks) and specific deviations by particular behaviors. An example of the latter is the risk of "moving" which is seen as more risky for losing friends than for injury (see Figures 22 and 24). Additional examples may easily be found by closely examining Figures 22 to 34 and other Figures of means that were presented earlier for age, sex and type of rating differences.

D. MEANS OF THE COLLEGE SAMPLE (8)

METHOD

Sample: This college sample (8) included 50 male and 51 female undergraduates from a private four-year college in the San Diego area. These students were recruited from classes in Introductory Psychology and from other psychology and sociology classes which are basically composed of freshmen and sophomores. They do not constitute a random sample, but should be reasonably representative of the student population at this college.

Procedure: All subjects were volunteers who anonymously filled out the Revised College version of the RTAQ (see Appendix IV). A senior psychology major contacted the subjects and gave the questionnaire.[1] Subjects were instructed to omit any question about their

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[1] Thanks are due to Dennis Johnson for his assistance in this part of the research.

FIGURE 35

Means - Risks - College Sample

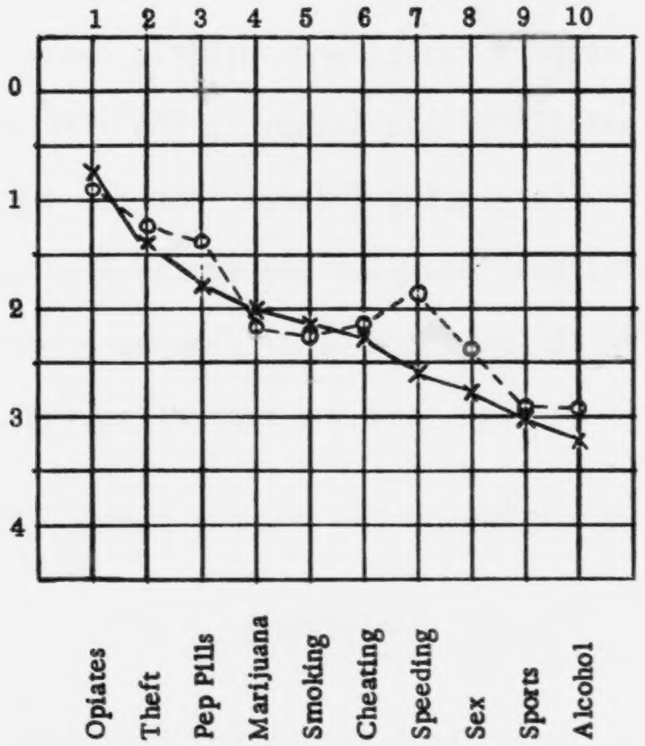


FIGURE 36

Means - Motives - College Sample

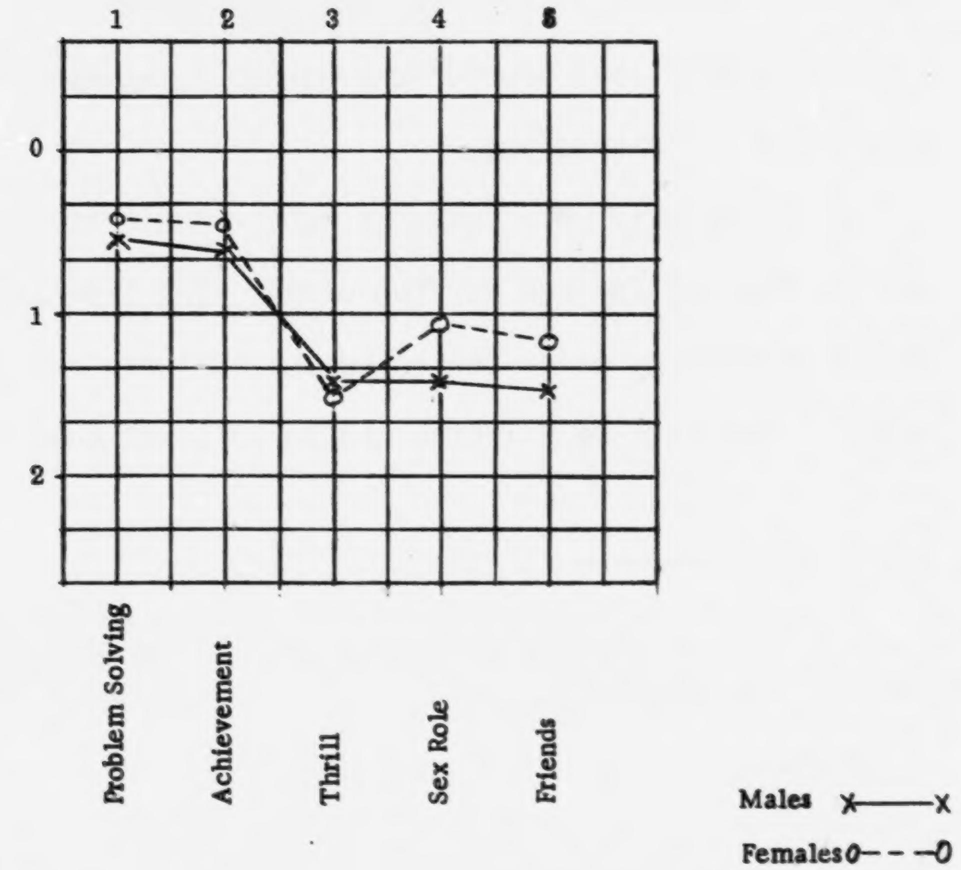


FIGURE 37

ACHIEVEMENT
Means - ~~Action~~ Gains - College Sample

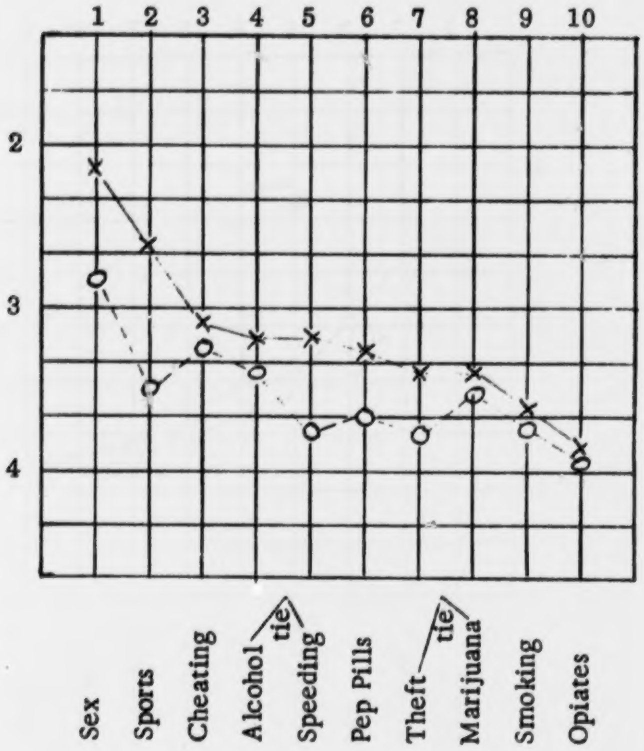


FIGURE 38

Means - Thrill Gains - College Sample

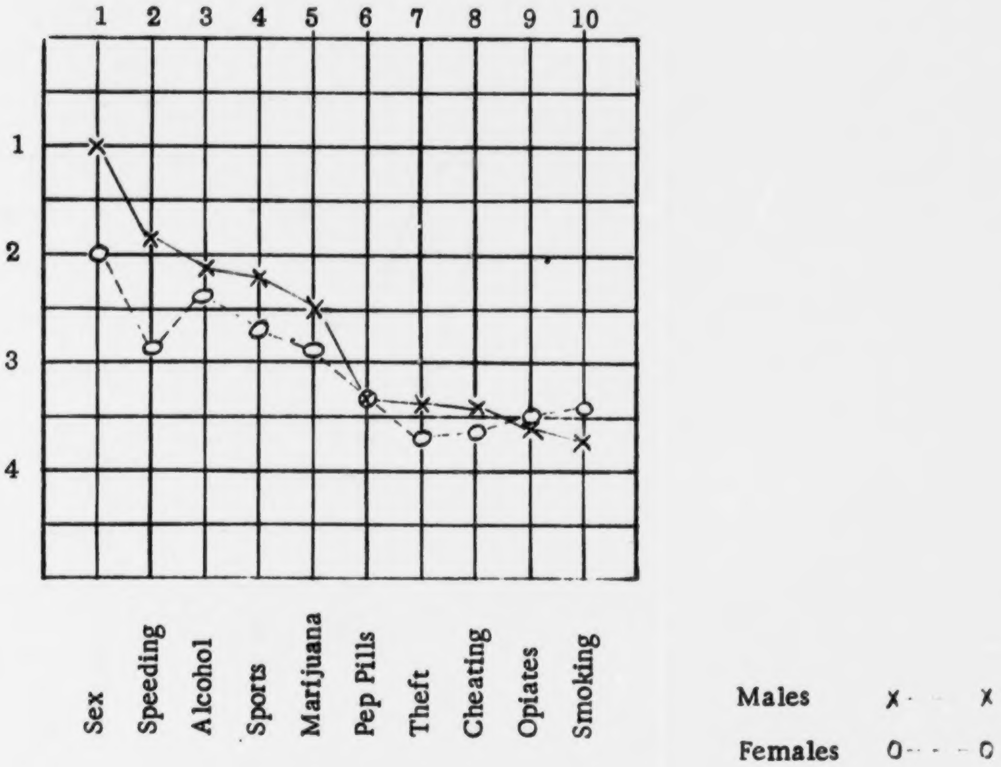


FIGURE 39

Means - Friends Gains - College Sample

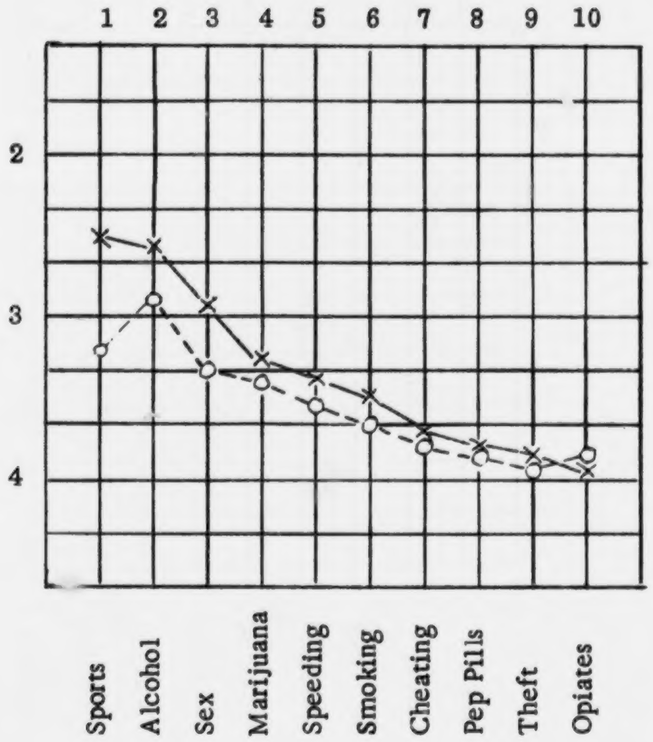


FIGURE 40

Means - Sex Role Gains - College Sample

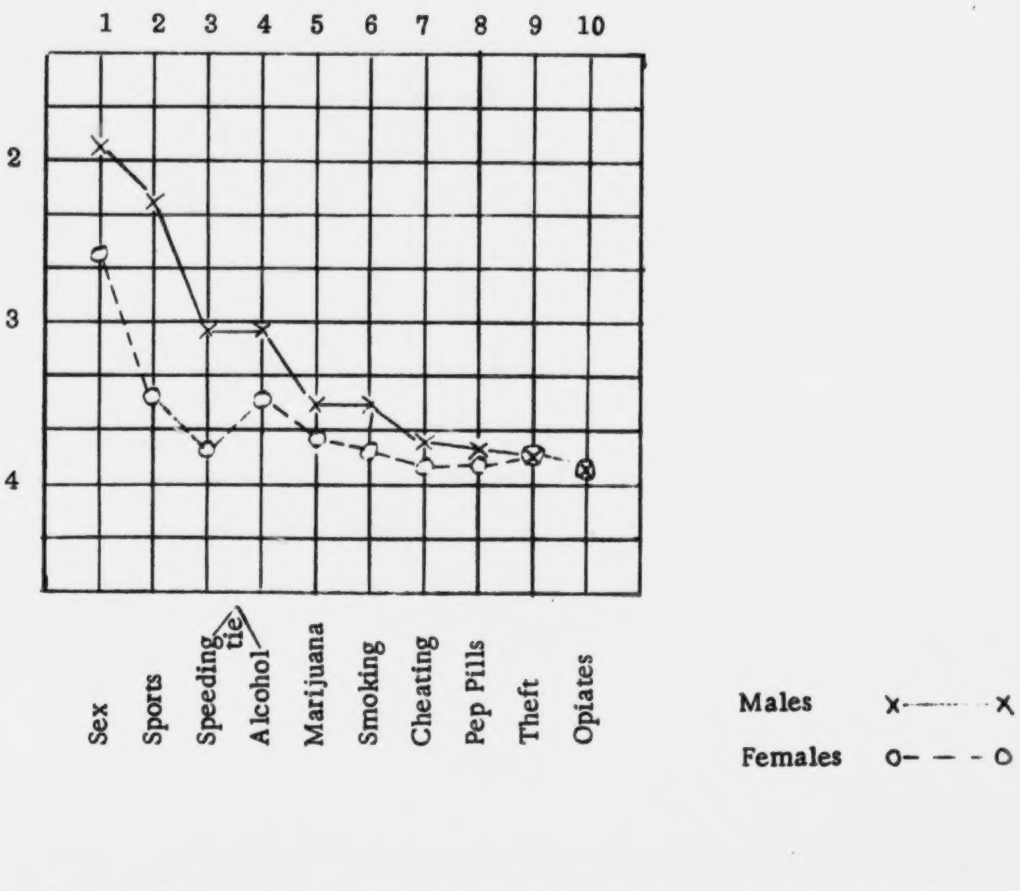
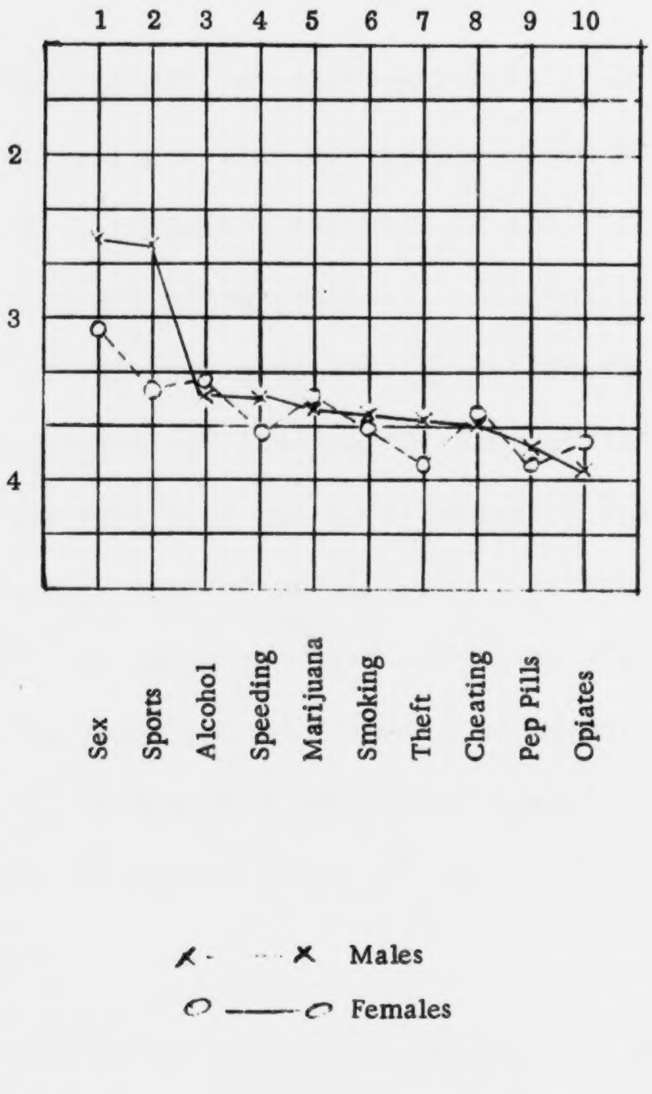


FIGURE 41

Means - Problem Solving Gains - College Sample



behavior that they could not answer honestly. Very few subjects omitted answers (no more than 2-4 on any item). It was possible to determine in what order and at what age the college students engaged in the behaviors.

Analysis: Means and other rating statistics were computed in the usual manner.

RESULTS

Figures 35-41 show the means for the college samples. The general pattern is quite similar to that for all of the other samples, and, therefore, will not be discussed in detail. There are some interesting sex differences, however, which deserve comment. The college females generally see less gain than the males for the 10 behaviors. This difference is sharpest for sports, sex and alcohol (see Figures 37-41). Females also see more risk for these behaviors (Figure 35) and rate their motivation to make friends and fulfill their adult sex role as higher than the males do (Figure 36). All of these results are to be expected on the basis of known sex differences and parallel nicely the actual frequencies of behavior where females are less active than the males in sports, sex, and most other risky behaviors.

E. GENERAL SUMMARY AND DISCUSSION OF THE RATING MEANS

In summary, there is a very stable set of attitudes about behavior which generalize over age, sex and type of rating. Illegal drug use and other crime are generally seen as most risky while sports, driving, and use of legal drugs are seen as less risky. The reverse is true for ratings of "gain." Personal actions such as "setting a good example" and "love" are seen as most effective for control of risky behavior while institutional actions such as education and church and the law are seen as less effective. Differences between groups are relatively large on the "action" ratings and relatively small on ratings of "risk" and "gain." When differences do occur on "risk" and "gain" ratings, they usually are of a sort that would be expected and indicate that the subjects discriminated between the various ratings rather than just giving rote responses.

The use of ratings for several types of "gain," "risk" and "action" may be of value for pinpointing refined differences between specific sub-groups of sex or ages. However, for purposes of predicting behavior a simple set of generalized "risks" and "gains" categories would probably suffice.

The results from the Coronado Adult sample (5) deserve some additional discussion. It was expected at the start of this part of the research that adults might see such behaviors as drug use as more risky for the young than for themselves and this was generally the case. It was not expected, however, that the adults would also perceive the young as getting more "gain" than adults from these same behaviors. The usual finding in the data is that a behavior is rated as offering less gain if its risk is rated high. The adult attitude toward relative risk and gain for the young runs against this pattern. Indeed, the risks are not rated by the adults as much higher for the young as the gains are.

The adults seem to be saying that they don't see these behaviors as profitable for themselves but the young might find a greater temptation. In fact, the school sample tended not to rate the behavior gains quite as high for themselves as the adults did for the young. It is difficult to make a direct comparison since the questionnaires had somewhat different answers. Perhaps the most relevant comparisons of gain means would be Figures 7, 16, 28 and 29. A direct comparison of injury risk ratings can be made in Figures 4, 13, and 22. Both adult and school groups are in close agreement on the risks of hard drugs, abortion and major theft. However the two age groups part company in marijuana use and sex where the school groups see less risk. In general the school groups see about the same level of risk or somewhat less for themselves as the adults see for themselves. In short, there is a tendency of the adults and the school groups to disagree at critical points. Adults are somewhat more optimistic about "gains" for the young than the young are. On behaviors that are the major focus of social conflict at the moment (marijuana, sex) the adults see more risk for the young than the young do.

On ratings of actions to control behavior the adults generally feel the actions would be more effective for the young than for themselves. In addition, the adults tended to see most "actions" as more effective in general than the school groups did (see Figures 8 - 12, 17 - 21, and 31 - 34). This is similar to the finding of higher rating of effectiveness for "actions" in the earlier parent group (see Figure 3).

If these results hold up in later replications they go far to explain the behaviors of concerned adults as they relate to the young.

Adults view the young as facing high risk situations which offer relatively high chances for "gain." Such dangerous and tempting behaviors need to be controlled and the adults believe that effective controls are possible. In such a situation the only rational thing to do is to press hard for actions to control the dangers. Adults and the school group agree that personal interaction type actions are the most effective, but adults see institutional action by the church, law, school and community as having much more potential than do the school groups.

Several possibilities are suggested by the mean ratings as steps for future investigation. Parents, teachers and pupils should be informed on the differences or "gaps" in their attitudes. One of the most interesting possibilities is to show the adults that the young do not see as much "gain" for themselves in many risky behaviors as the adults see for the young. Such a step might serve to reduce any feeling by adults that the young are being inordinately tempted.

An obvious need is to discover a common basis for action. Since all tend to agree that actions such as love and personal example are the most effective, serious steps might be taken to define just what these actions imply. What sort of love and example do the children want and are the adults willing and able to give? Is it possible to move adults in the direction of personal interaction and away from institutional controls? Perhaps substitute "examples" might be found in counselors who are especially trained for such work.

It is interesting to note that marijuana use, drinking and sex tend to be rated as moderate (middle range) risks by all groups and are seen as having above average "gain" by the school groups. (All but marijuana are seen as offering above average "gains" by the adults.) It is the moderate risk type of behavior that groups striving for status and achievement tend to select. Such behavior offers challenge and excitement without a very high chance of failure. These are, as noted above, the very behaviors that are now the focus of the conflict between our generations.

Part III.

Correlations Between Risk-Taking Attitudes

The procedures and samples have already been described (see pages 7 - 18). The present section of this report will consider the patterns of correlations between the various attitude ratings. The question to be answered here is, "Are there meaningful structures within attitudes toward risk and gain?"

The ratings were correlated with each other and then either cluster or factor analyzed (see page 17 for a discussion of these techniques).

A. CLUSTER AND FACTORS FOR SAMPLES 1-4

RESULTS

The cluster analysis for the conference group (Sample 1) has been reported in an earlier paper (Carney, 1968a). Briefly, three major clusters were found. Cluster 1 had the highest loadings for sexual behaviors and drugs and was called the "Sex-Pot" cluster. Those who felt that these "immoral" behaviors were dangerous tended to favor law enforcement and church related actions. Cluster 2, the so-called "Law and Order" cluster, was in fact composed of the legal "actions" plus a fair overall correlation with Cluster 1 behaviors. Cluster 3 -- the "Masculine-Aggressive" cluster -- consisted of agressive and physically dangerous behaviors such as playing "football," "fighting" and "driving a car." "Smoking" and "drinking" behavior were most closely related to this cluster. Anti-social behaviors such as "theft" and "protesting" had moderate loadings on both Clusters 1 and 3. Those who felt Cluster 3 behaviors were dangerous tended to favor "personal example" and "educational actions."

Due to the small sample sizes the parent and teacher groups each gave only one statistically reliable cluster. In each case the clusters strongly resembled the "sex-pot" cluster found for the conference group. However, the parents had "law enforcement" actions strongly weighted in their cluster while the teachers who saw these behaviors as dangerous favored social action, advertising and church programs. Table 10 shows these clusters.

Table 11 shows five factors obtained from the CWU data. Males and females have been combined due to the general similarity of the results for the sexes taken separately. College students showed some tendency to discriminate between ratings of social and individual risks. Correlations were higher between ratings within the categories of social and individual risk than between ratings across categories. This is reflected by the first two factors in Table 11. These factors are essentially the sex-pot factor found with the other groups -- one for the social (factor 1) and one for the individual risks (factor 2). Factor 1 shows high loadings for such aggressive activities as "football" and "motorcycle riding" and relatively low loadings for the use of "heroin." This suggests that college students tend to combine drug use and aggressive activities into one socially risky set of behaviors.

TABLE 10.

Cluster for Parent and Teacher Ratings
Coronado, 1969

PARENTS			TEACHERS		
Rating		Loading	Rating		Loading
(S)	L.S.D.	.999 *	(I)	Marijuana	.958 *
(S)	Heroin	.928 *	(I)	L.S.D.	.958 *
(I)	L.S.D.	.940 *	(I)	Abortion	.952 *
(I)	Sex	.715 *	(S)	L.S.D.	.913 *
(I)	Marijuana	.710	(S)	Marijuana	.899 *
(I)	Abortion	.707	(S)	Cheating	.858 *
(A)	Enforcement	.641	(A)	Social	.735
(S)	Marijuana	.623	(I)	Cheating	.672
(A)	Education	.622	(I)	Protest	.670
(I)	Theft	.581	(I)	Theft	.664
(I)	Homosexual	.581	(I)	Sex	.622
(A)	Law	.483	(I)	Pep Pills	.614
(A)	Social	.459	(S)	Pep Pills	.614
(A)	Church	.459	(A)	Advertisements	.608
(I)	Protest	.420	(S)	Abortion	.594
(I)	Smoking	.375	(S)	Driving	.591
(S)	Theft	.351	(A)	Church	.583
(I)	Marriage	.348	(I)	Homosexual	.576
(I)	Football	.341	(S)	Protest	.574
(I)	Drag Racing	.336	(S)	Sex	.549

(S) = Social Risk Rating
(A) = Action Rating
(I) = Individual Risk Rating

* The cluster program indicates that these are the major contributing measures in the cluster.

TABLE 11.

Ratings Factors (Total Sample, CWU, 1968)

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
(S) Marijuana	.724	(I) L.S.D.	.874	(I) Motorcycling	.686	(A) Adv. Dangers	.665	(A) Laws	.757
(S) Sex	.721	(I) Heroin	.768	(I) Driving	.657	(A) Research	.597	(A) Enforcement	.678
(S) Motorcycling	.687	(I) Pep Pills	.628	(I) Drinking	.633	(S) Drinking	.593	(A) Government	.651
(S) Football	.663	(I) Theft	.619	(I) Job Changing	.577	(A) Social	.573	(A) Education	.473
(S) Homosex Acts	.653	(I) Homosex Acts	.585	(I) Protesting	.532	(A) Church	.530	(S) Heroin	.460
(S) Pipes	.637	(I) Abortion	.570	(I) Smoking	.509	(A) Per. Example	.369	(S) L.S.D.	.372
(S) L.S.D.	.631	(I) Fighting	.546	(S) Driving	.486	(A) Government	.354	(A) Psychological	.323
(S) Pep Pills	.618	(I) Marijuana	.484	(I) Football	.474	(I) Cheating	.306	(S) Homosex Acts	.270
(S) Drag Racing	.614	(I) Sex	.442	(I) Pipes	.472	(S) Theft	.292	(A) Social	.255
(S) Protesting	.472	(I) Cheating	.441	(S) Smoking	.460	(I) Sex	.288	(S) Abortion	-.223
(S) Marriage	.394	(I) Drag Racing	.420	(S) Job Changing	.446	(S) Marriage	.282	(I) Abortion	-.238
(S) Cheating	.387	(I) Pipes	.386	(I) Marriage	.370	(I) Fighting	.231		
(S) Heroin	.380	(S) Fighting	.265	(I) Drag Racing	.359	(A) Education	.222		
(S) Fighting	.289	(S) Homosex Acts	.221	(I) Marijuana	.254	(I) Motorcycling	.216		
(S) Drinking	.227	(I) Football	-.211	(S) Motorcycling	.204	(S) Motorcycling	.209		
		(A) Per. Example	-.241	(I) Homosex Acts	-.254	(S) Heroin	-.202		
						(I) Pep Pills	-.219		
						(I) Smoking	-.221		
						(I) Pipes	-.234		
						(S) L.S.D.	-.329		

(S) = Social Risk Ratings
(I) = Individual Risk Ratings
(A) = Action Ratings

F-1 = Sex-Pot - Social
F-2 = Sex-Pot - Individual
F-3 = Masculine Aggressive
F-4 = Persuasive Actions
F-5 = Law and Order

Factor 2 in the CWU data is more nearly like the earlier sex-pot factors since it is clearly dominated by drug use, sex and anti-social behaviors. There is even a slight tendency among the college students for the socially approved aggressive behavior of "football" to have a negative loading on this factor.

Factor 3 is similar to the masculine-aggressive factors found in the other groups. Drinking and smoking are again found in this factor and not with the other drugs.

Factors 4 and 5 are primarily concerned with the "action" ratings. Factor 5 is clearly the "law and order" factor and shows again the tendency for those who favor such methods to rate drug use as more dangerous. However, this is not a clear cut pattern and there is even a low-level negative weight for abortion. This factor represents a favorable rating for coercive actions. Since education and psycho-therapy appear on this factor it may indicate that college students see these actions as somewhat coercive.

Factor 4 is most interesting and has a fairly well developed bi-polarity. At one end of the factor are persuasive actions and masculine-aggressive behaviors and at the other end is drug use. This outcome reinforces the earlier finding that those who favor persuasive techniques view aggressive behavior as more dangerous. In addition this factor shows that college students carry the process somewhat further and tend to rate drug use as less risky if they favor persuasive techniques of action.

DISCUSSION

The findings of the factor analysis are generally in good agreement over the various samples although there are minor variations. Drug use and sexual behavior tend to cluster into what has been called the "Sex-Pot" factor. This factor has overlap with those aggressive behaviors which have an "illegal" or "immoral" tinge, such as cheating and theft. A second factor groups those behaviors that are physically risky but not necessarily anti-social. Smoking and drinking are most closely related to this factor which is called the "masculine-aggressive" factor. Motorcycle riding and playing of contact sports such as football characterize the masculine-aggressive factor. The actions fall into two groups: "persuasive" and "coercive." The coercive actions are typified by stricter law enforcement and tougher laws (the "Law and Order" factor). Education and personal example are leading examples of persuasive actions. Such actions are favored by those who rate Masculine-Aggressive behaviors as more dangerous while those who favor law and order actions rate the sex-pot behaviors as more dangerous.

B. FACTORS FOR THE CORONADO ADULT RATINGS (SAMPLE 5)

ANALYSIS

Due to the very large number of ratings (300) taken from this sample it was not possible to calculate overall factors which included every rating. Instead, each type of rating was correlated within itself (e.g., "injury risk" to "self" ratings over 25 behaviors), and the first 5 or 6 factors were calculated (six on "risk" and "gain" ratings and five on "action" ratings). Factor loadings of .250 or higher are shown on each factor in the tables. Such loadings correspond roughly to a single correlation which would reach statistical significance with a sample of this size.

Although factors were calculated separately for males and females and for the males and females combined, only the factors for the males will be considered here. There were only 22 females in this sample and factors from so many ratings by such a small number of subjects are likely to be unreliable. Also the factors for the females looked quite different in some cases from those for the males and any factors combining males and females may be misleading.

Since this set of data was taken primarily as background for the school data the adult factor results had a low priority and have not yet been given the full attention that they deserve. They are presented here in an unfinished form to give some idea of how the adult data looked in comparison to the school sample data. To aid the reader a very brief reminder will now be given of what a factor is and how to read the tables.

A factor is a concise summary of how highly several measures (in this case ratings) relate to each other. It asks the question, "Out of a matrix (or set) of correlations are there any measures which tend to group together so that a score on one measure will predict a score on all of the other measures?" For example, if a subject sees low risk for the use of marijuana, are there any other behaviors that he consistantly will see as having low risk? If so, which other behavior ratings are mostly highly related to the marijuana ratings?

The numerical values in Tables 12 to 29 represent "Factor Loadings." These loadings are a sort of average agreement between one rating and the other ratings on the factor. The higher the loading the greater the average agreement. In some cases the loadings are preceeded by a negative sign. This means that if a high score is made on the ratings with + (plus) loadings a low score will be made on the ratings with a - (negative) loading.

RESULTS

Tables 12 to 19 present the factor loadings for the first six factors on the risk and gain ratings. The factors are listed in the order by which the computer extracted them. A tentative identification has also been placed by each factor.

The Sex-Pot Factors: It is again possible to identify a "Sex-Pot" factor and a "Masculine-Aggressive" factor. However, the more powerful factor-analytic techniques used here pulled these factors into sub-factors which had higher agreement within them. The first factor extracted is nearly always the one with high loadings for the "hard" drugs. This is the basic set of identifying ratings for what has been called the sex-pot factor, or F-1, and the practice is continued here. However, such behaviors as sex and abortion are often to be found in a separate factor.

Masculine-Aggressive Factors: This factor also tends to be split into two or more sub-factors. The behaviors without strong social disapproval such as "football" and "driving" are often found on one factor and "smoking," "drinking" and less socially approved behaviors are found in one or more other factors. To be consistent with past practice the factor with the more approved behaviors will be called the masculine-aggressive or F-2 factor.

Other Risk and Gain Factors: The factor structure tends to be somewhat variable. A factor is often found which combines "smoking," "drinking," "cheating," "fighting," "motorcycling" and "drugs." This factor will tentatively be called F-3. It seems to represent rowdy anti-social, "Roughneck" or "Leather-Jacket" type behavior (Reister, and Zucker, 1968).

A fourth factor (F-4) is sometimes seen and has relatively high loadings for "homosexual" behavior, "sniffing," "major theft" and "abortion." This factor may be easily confused with F-3. Less reliable factors are occasionally found with high loadings for "moving" (F-5) and "marriage" (F-6).

Action Factors: Tables 20 to 29 show the factors for the action ratings. Five factors were computed, and with only 10 actions one would expect short factors -- which is the case. The factors are again listed as they came from the computer. A fairly reliable set of factors appears to be present, but they will not be given numbers or names. The first factor to be listed is usually one combining education, personal example, church and social actions. There are then (in any order) factors with dropping out of school, love, law and psychotherapy as the highest or near highest loading actions respectively. Other actions appear on the last four named factors in various arrangements that usually group personal interaction type and institutional or coercive behaviors in appropriate combinations.

TABLE 12.

Factors for Self - Injury Risk - Coronado Adult Males

1 (F-1)		2 (F-5)		3 (F-2)		4 (F-4?)		5 (F-6)		6 (F-3?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Heroin	.893	Moving	.785	Driving	.799	Smoking	.917	Marriage	.764	Beer	.927
Mainlining Drugs	.884	Stealing	.588	Drag Racing	.428	Pipes	.835	Football	.257	Liquor	.820
L.S.D.	.878	Abortion	.501	Marriage	.374	Stealing	.466	Sniffing	-.281	Cheating	.455
Gang Fighting	.877	L.S.D.	.297	Moving	.307	Sniffing	.381	Homosex Acts	-.467	Unmarried Sex	.309
Stealing - Cars	.843	Mainlining Drugs	.265	Stealing - Cars	-.252	Pep Pills	.308	Protesting	-.562	Sniffing	.291
Fighting (2)	.840			Abortion	-.273					Abortion	.291
Pep Pills.	.762			Cheating	-.541					Protesting	.263
Drag Racing	.749									Pep Pills	.259
Homosex Acts	.743										
Motorcycling	.706										
Marijuana	.702										
Football	.660										
Sniffing	.641										
Unmarried Sex	.547										
Abortion	.536										
Cheating	.460										
Protesting	.403										

TABLE 13.

Factors for Young - Injury Risk - Coronado Adult Males

1 (F-1)		2 (F-2?)		3 (F-2)		4 (F-6)		5 (F-4)		6 (F-3?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Heroin	.910	Smoking	.742	Driving	.794	Stealing	.802	Sniffing	.644	Sex	.720
Mainlining Drugs	.904	Pipes	.723	Drag Racing	.707	Marriage	.734	Liquor	.636	Protesting	.706
L.S.D.	.902	Beer	.696	Football	.660	Cheating	.562	Abortion	.592	Moving	.540
Homosex Acts	.754	Fighting (2)	.495	Motorcycling	.430	Pipes	.281	Motorcycling	.419	Marijuana	.410
Stealing - Cars	.714	Protesting	.446			Homosex Acts	.250	Pep Pills	.394	Liquor	.400
Gang Fighting	.706	Cheating	.308					Marijuana	.313	Cheating	.389
Pep Pills	.668	Liquor	.260					Smoking	.251	Beer	.363
Fighting (2)	.426							Beer	.249	Motorcycling	.330
Marijuana	.366							Fighting (2)	-.438	Homosex Acts	.287
Abortion	.347									Football	.287
										Drag Racing	.255

TABLE 14.

Factors for Self - Disapproval Risk - Coronado Adult Males

1 (F-1)		2 (F-6?)		3 (F-2)		4 (F-5)		5 (F-3?)		6 (F-4?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Mainlining Drugs	.948	Beer	.891	Football	.784	Moving	.716	Protesting	.694	Smoking	.802
L.S.D.	.935	Liquor	.878	Motorcycling	.711	Stealing	.603	Drag Racing	.421	Driving	.346
Heroin	.934	Marriage	.742	Protesting	.325	Cheating	.327	Sniffing	.309	Abortion	.299
Stealing - Cars	.932	Pipes	.716	Pipes	.276	Marijuana	.280	Pep Pills	.309	Motorcycling	.261
Homosex Acts	.880	Driving	.593	Driving	.275	Marriage	-.373	Cheating	.301		
Pep Pills	.835	Smoking	.427					Fighting (2)	.291		
Marijuana	.824	Moving	.421					Gang Fighting	.279		
Abortion	.792	Football	.293					Pipes	-.253		
Fighting (2)	.771							Driving	-.356		
Sex	.771										
Sniffing	.769										
Gang Fighting	.764										
Drag Racing	.754										
Cheating	.682										
Stealing	.492										
Protesting	.403										
Motorcycling	.270										

TABLE 15.

Factors for Young - Disapproval Risk - Coronado Adult Males

1 (F-1)		2 (F-2)		3 (F-3)		4 (F-4)		5 (F-5)		6 (F-4?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.874	Pipes	.815	Liquor	.750	Gang Fighting	.809	Moving	.814	Drag Racing	.733
Mainlining	.868	Marriage	.751	Stealing	.747	Fighting (2)	.723	Driving	.505	Motorcycling	.509
Heroin	.862	Smoking	.693	Sex	.724	Protesting	.615	Motorcycling	.312	Abortion	.375
Stealing - Cars	.708	Football	.683	Beer	.690	Cheating	.508	Cheating	.292	Sex	.283
Marijuana	.673	Driving	.545	Pep Pills	.580	Abortion	.503	Football	.292	Homosex Acts	.249
Homosex Acts	.661	Beer	.518	Sniffing	.556	Stealing - Cars	.413	Homosex Acts	-.402	Stealing - Cars	-.266
Pep Pills	.633	Motorcycling	.465	Protesting	.451	Football	.352			Cheating	-.333
Sniffing	.630	Liquor	.373	Cheating	.430	Moving	.295				
Cheating	.449	Protesting	.269	Marijuana	.391	Homosex Acts	.284				
Abortion	.291			Pipes	.269	Sex	.278				
Motorcycling	.263										

TABLE 16.

Factors for Self - Problem Solving Gain - Coronado Adult Males

1 (F-1)		2 (F-4)		3 (F-2)		4 (F-3)		5 (F-5)		6 (F-6?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Heroin	.945	Liquor	.870	Driving	.782	Marijuana	.807	Moving	.866	Protesting	.770
Speed	.920	Beer	.859	Marriage	.650	Fighting (2)	.787	Stealing	.438	Motorcycling	.442
L.S.D.	.914	Pipes	.747	Football	.519	Stealing - Cars	.775	Football	.301	Smoking	.390
Homosex Acts	.902	Abortion	.535	Motorcycling	.303	Drag Racing	.771	Smoking	.284	Drag Racing	.318
Sniffing	.838	Smoking	.461			Sex	.715	Sex	-.299	Pipes	.267
Gang Fighting	.621	Sex	.375			Gang Fighting	.712			Pep Pills	.246
Abortion	.579	Driving	.270			Cheating	.710			Marriage	-.490
Pep Pills	.579	Football	-.301			Pep Pills	.647				
Stealing - Cars	.522					Stealing	.617				
Fighting (2)	.471					Motorcycling	.561				
Cheating	.454					Football	.493				
Marijuana	.443					Sniffing	.478				
Drag Racing	.397					L.S.D.	.351				
Motorcycling	.335					Homosex Acts	.338				
Smoking	.322					Heroin	.284				
						Speed	.261				
						Marriage	-.278				

TABLE 17.

Factors for Young - Problem Solving Gain - Coronado Adult Males

1 (F-1)		2 (F-3)		3 (F-5)		4 (F-2?)		5 (F-6)		6 (F-4?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Heroin	.907	Protesting	.842	Moving	.881	Football	.863	Marriage	.931	Pipes	.695
L.S.D.	.895	Liquor	.819	Fighting (2)	.340	Motorcycling	.302	Driving	.480	Stealing	.646
Speed	.879	Drag Racing	.778	Stealing - Cars	.280	Smoking	.262			Driving	.487
Sniffing	.870	Beer	.726	Smoking	-.248	Stealing - Cars	-.248			Cheating	.408
Homosex Acts	.782	Sex	.684	Marijuana	-.269	Cheating	-.358			Motorcycling	.364
Stealing - Cars	.758	Motorcycling	.682			Abortion	-.660			Stealing - Cars	.344
Marijuana	.744	Pep Pills	.550							Beer	.339
Fighting (2)	.728	Driving	.496							Smoking	.326
Gang Fighting	.721	Pipes	.434							Abortion	.257
Pep Pills	.666	Gang Fighting	.382								
Cheating	.617	Marijuana	.363								
Stealing	.598	Smoking	.359								
Smoking	.515	Abortion	.358								
Abortion	.423	L.S.D.	.298								
Sex	.397	Sniffing	.262								
Drag Racing	.343	Football	.255								
Liquor	.269	Speed	.254								
Protesting	.259										
Motorcycling	.256										

TABLE 18.

Factors for Self - Pleasure Gain,- Coronado Adult Males

1 (F-1)		2 (F-2)		3 (F-2?)		4 (F-3)		5 (F-2?)		6 (F-6)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Marijuana	.964	Football	.797	Liquor	.905	Sex	.772	Smoking	.824	Marriage	.833
Speed	.961	Motorcycling	.782	Beer	.875	Stealing - Cars	.677	Pipes	.725	Driving	.572
L.S.D.	.961	Drag Racing	.751	Pipes	.386	Cheating	.637	Marijuana	.311	Moving	.347
Homosex Acts	.913	Moving	.726	Driving	.307	Fighting (2)	.569				
Abortion	.912	Protesting	.720	Protesting	.275	Stealing	.565				
Sniffing	.856	Driving	.437			Gang Fighting	.459				
Pep Pills	.834	Gang Fightng	.436			Drag Racing	.360				
Marijuana	.738	Sniffing	.343			Marijuana	.346				
Gang Fighting	.683	Fighting (2)	.338			Motorcycling	.322				
Stealing	.668	Cheating	.312			Smoking	.257				
Fighting (2)	.612	Stealing	.300								
Cheating	.607	Stealing - Cars	.290								
Stealing - Cars	.594	Pipes	.260								
Drag Racing	.314										
Marriage	-.340										

TABLE 19.

Factors for Young - Pleasure Gain - Coronado Adult Males

1 (F-1)		2 (F-3)		3 (F-5)		4 (F-6)		5 (F-2)		6 (F-4?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Stealing - Cars	.894	Beer	.808	Moving	.923	Marriage	.930	Football	.888	Protesting	.581
L.S.D.	.864	Driving	.793	Abortion	.384	Sex	.275	Motorcycling	.485	Drag Racing	.492
Speed	.861	Smoking	.780	Driving	.323	Driving	.259	Gang Fighting	.458	Marijuana	.336
Cheating	.855	Liquor	.742	Stealing - Cars	.255			Fighting (2)	.382	Motorcycling	.306
Heroin	.839	Drag Racing	.646	Cheating	.247			Protesting	.283	Abortion	-.473
Homosex Acts	.803	Stealing	.619					Drag Racing	.276		
Fighting (2)	.775	Motorcycling	.587					Sex	.265		
Pep Pills	.759	Sex	.574								
Gang Fighting	.722	Pipes	.513								
Sniffing	.719	Marijuana	.496								
Marijuana	.701	Pep Pills	.484								
Stealing	.601	Protesting	.474								
Abortion	.570	Heroin	.348								
Pipes	.531	Speed	.330								
Sex	.451	L.S.D.	.325								
Liquor	.440	Sniffing	.300								
Protesting	.374										
Smoking	.347										
Beer	.334										

TABLE 20.

Factors for Self - Smoking Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Church	.829	Dropping Out	.840	Law	.956	Adv. Dangers	.866	Love	.926
Per. Example	.769	Psychological	.669	Psychological	.338	Psychological	.429	Parents	.617
Education	.767	Society	.363						
Society	.750								
Parents	.621								

TABLE 21.

Factors for Young - Smoking Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Education	.886	Dropping Out	.952	Love	.904	Law	.958	Psychological	.749
Per. Example	.760	Society	.300	Parents	.838	Psychological	.358	Society	.729
Church	.745	Adv. Dangers	-.290	Church	.320			Adv. Dangers	.702
Adv. Dangers	.469			Per. Example	.239			Church	.249
Society	.418								
Parents	.261								

TABLE 22.

Factors for Self - Racing Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Education	.854	Law Enforcement	.955	Dropping Out	.886	Love	.818	Adv. Dangers	.758
Church	.762	Psychological	.294	Psychological	.543	Parents	.786	Psychological	.493
Per. Example	.708	Love	.268	Society	.504	Psychological	.477	Society	.424
Society	.626			Per. Example	.323	Per. Example	.461	Church	.347
Adv. Dangers	.380			Church	.297	Education	.297		
Parents	.377								

TABLE 23.

Factors for Young - Racing Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Education	.870	Dropping Out	.979	Love	.820	Psychological	.853	Law Enforcement	.924
Adv. Dangers	.794			Per. Example	.739	Society	.740	Church	.288
Church	.635			Parents	.686	Parents	.580	Per. Example	.262
Per. Example	.376			Church	.377	Church	.453	Psychological	.249
Society	.371			Society	.349				
				Education	.306				

TABLE 24.

Factors for Self - Sex Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Parents	.835	Law Enforcement	.823	Love	.781	Dropping Out	.968	Psychological	.916
Church	.802	Society	.342	Parents	.272	Society	.262	Adv. Dangers	.466
Education	.742	Per. Example	-.629	Adv. Dangers	-.582			Society	.431
Per. Example	.522							Love	.317
Society	.474							Law Enforcement	.282
								Per. Example	.271

TABLE 25.

Factors for Young - Sex Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Parents	.839	Dropping Out	.936	Education	.891	Law Enforcement	.934	Society	.816
Love	.783	Psychological	.616	Adv. Dangers	.631	Psychological	.477	Adv. Dangers	.582
Per. Example	.723			Church	.463				
Church	.632			Psychological	.291				
Society	.394								

TABLE 26.

Factors for Self - Drug Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Per. Example	.871	Law Enforcement	.882	Dropping Out	.961	Psychological	.896	Adv. Dangers	.901
Society	.851	Parents	.558			Love	.738	Church	.370
Church	.827	Education	.438			Parents	.252	Education	.263
Education	.680	Love	.403						
Parents	.639								
Adv. Dangers	.292								
Love	.273								

TABLE 27.

Factors for Young - Drug Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Love	.888	Education	.870	Dropping Out	.972	Psychological	.927	Law Enforcement	.942
Per. Example	.780	Church	.853	Adv. Dangers	.251	Society	.442		
Parents	.565	Adv. Dangers	.778						
Society	.328	Society	.671						
		Parents	.612						
		Per. Example	.401						

TABLE 28.

Factors for Self - Cheating Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Social	.821	Psychological	.912	Dropping Out	.957	Law Enforcement	.867	Love	.886
Per. Example	.808	Love	.318	Adv. Dangers	.356	Adv. Dangers	.718	Parents	.540
Church	.771					Education	.441	Per. Example	.393
Education	.753					Parents	.423		
Parents	.597					Church	.370		
Adv. Dangers	.261								

TABLE 29.

Factors for Young - Cheating Action - Coronado Adult Males

F-1		F-2		F-3		F-4		F-5	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Church	.791	Love	.900	Dropping Out	.922	Psychological	.882	Adv. Dangers	.812
Society	.753	Parents	.687	Society	.440	Law Enforcement	.729	Law Enforcement	.340
Education	.747	Per. Example	.518	Adv. Dangers	.287	Parents	.362	Per. Example	-.475
Per. Example	.585	Church	.251	Psychological	.267	Education	.300		
Parents	.427								
Law Enforcement	.335								

DISCUSSION

The factors in this section have been identified and named in an impressionistic fashion and the consistency of the factors from one type of rating to another has not been evaluated systematically. The next section shows that similar factors appear in the school data and some quantitative comparison of the consistency of the factors has been done.

The adult data does suggest that a reasonable commonality of factor structure extends through all of the samples. The usefulness of this structure lies both in the understanding of how various behaviors are related and in the possible use of factors to derive scores for predicting behavior. Additional discussion of these points is given in the next section.

C. FACTORS FOR SCHOOL SAMPLES (6 AND 7)

ANALYSIS

Again the number of ratings was so large that it was not possible to intercorrelate all of them. The procedure followed was that used for the Coronado adults. Behaviors within each type of rating were correlated and the first five factors were extracted.

RESULTS

Types of Factors: In each case factors were obtained which paralleled the "Sex-Pot" or F-1 and "Masculine-Aggressive" or F-2 factors found in the earlier samples. The exact loadings of the behaviors on these factors varied from group to group and by type of

TABLE 30.

Rank Order Correlations Between Sex-Pot Factors (F-1)
Coronado School Sample
1969

		INJURY RISKS				SELF RESPECT RISKS			
		Jr. High Boys	Jr. High Girls	Sr. High Boys	Sr. High Girls	Jr. High Boys	Jr. High Girls	Sr. High Boys	Sr. High Girls
INJURY RISKS	Jr. High Boys	---	.725	.619	.577	.738	NC	.569	.679
	Jr. High Girls	NC	---	.740	.580	NC	.665	NC	.728
	Sr. High Boys	NC	NC	---	.497	NC	NC	.569	.497
	Sr. High Girls	NC	NC	NC	---	NC	NC	NC	.646

		SELF RESPECT RISKS			
		Jr. High Boys	Jr. High Girls	Sr. High Boys	Sr. High Girls
SELF RESPECT RISKS	Jr. High Boys	---	.634	.745	.765
	Jr. High Girls	NC	---	.811	.552
	Sr. High Boys	NC	NC	---	.645
	Sr. High Girls	NC	NC	NC	---

NOTE: NC = Not Calculated -- a few example calculated were done, the other values are similar.

rating. There was, however, a substantial amount of agreement over groups and type of rating. Table 30 shows some examples of rank-order correlations between the F-1 factor loadings. These correlations are somewhat lower than are found for sets of means, but are none-the-less impressive evidence for a reliable pattern of attitudes since the frequencies of the actual behaviors also organize themselves in a similar pattern (see page 140). The behavior frequencies factors and rating factors also relate meaningfully to each other (see page 183) suggesting a useful relationship between attitudes and behaviors.

The "Masculine-Aggressive" or F-2 factors were not as consistent and often became mixed with other factors. In Tables 31 to 62 there is usually a factor which combines behaviors such as "stealing," "cheating," "motorcycling," "drinking" and "fighting" with some of the F-1 behaviors, but in a different order. This factor will be tentatively called the "Roughneck" or F-3 factor. It seems to reflect the types of behaviors typical of "Leather Jacket" anti-social gangs. The F-3 factor varies greatly from group to group and rating to rating and in some cases is distinguished from the "Sex-Pot" or F-1 factor only by the relatively high loadings for the hard drugs on the F-1 factor.

A fourth factor (F-4) is also frequently seen and is characterized by a relatively high loading for "homosexual" behavior, "major theft" and "abortion." This factor often overlaps with the F-3 factor and is highly variable. It is sometimes difficult to distinguish the F-3 and F-4 factors. One other factor also is relatively frequent, and it is characterized by a high loading for "moving" (F-5). These five factors are similar to the ones found for the Coronado Adults and have been given the same numbers.

The "action" rating factors are shown in Tables 63 through 82. These factors follow the same general pattern that was found in the Coronado adult sample (see page 85) and will not be discussed further here.

DISCUSSION

The data is probably best viewed as having one quite reliable and useful factor (F-1), one moderately reliable factor (F-2), and two identifiable but variable factors (F-3 and F-4). F-1 is characterized by high loadings for the more dangerous drugs. F-2 may be identified by high loadings for "football," "protesting" (demonstrating) and "drag-racing," while F-3 has high loadings for "cheating," "stealing" and "motorcycling" and F-4 has high loadings for "theft," "abortion" and "homosexual behavior." The behaviors on these factors overlap to a great extent and differ largely in the magnitudes of the factor loadings (rank-order in the factor).

For application in predicting frequency of illegal drug use the F-1 factor would probably give a very useful score. The F-2 (and F-3, F-4) factors may prove valuable for distinguishing between those who smoke and drink and do not use other drugs and those who both smoke and drink and use other drugs. The F-2 factor indicates a set of "square" behaviors which are relatively acceptable and can lead to conventional success and status in middle-class society. The F-3 factor seems more related, though not exclusively, to the type of behavior which is accepted in "lower-class" urban youth gangs. The F-4 factor emphasizes those behaviors which are of a more distinctly anti-social or imply a possible personality disturbance while F-5 brings together those behaviors related to changing residence. These factors are labeled F-1, F-2, F-3, F-4 and F-5 on Tables 31 to 62 to help the reader identify them since they are not always listed in the same order in the tables, but in the order extracted by the computer.

Due to the very large number of ratings, overall factors across different types of ratings and frequencies were not calculated. Such a calculation would have summarized everything quite nicely and avoided the extended lists of factors; however, it would also have taken a computer larger than was available and the costs would have exceeded available resources. The present approach was adopted as a reasonable compromise that would form the basis for an additional, more simplified analysis. This analysis is presented in a later section of this report (see page 201) and is based on the general conclusions from the factor analysis and the analysis of the means which indicate that there is sufficient consistency in the data to permit a pooling of the various types of ratings. Such adding together of the ratings loses some of the subtle differences in pattern between sex groups, age groups and types of ratings. It does, however, have the overwhelming advantage of being practical without much loss of reliability or credence.

D. CORRELATIONS BETWEEN RATINGS FOR COLLEGE SAMPLE (8)

A factor analysis was not done on the college sample since the type of pattern to be expected had already been established in the secondary school groups. The smaller number of measures in the college sample did, however, make it reasonable to calculate correlations between all of the scores.

Motive and Other Ratings: The motive ratings were unique to the college sample and provide the possibility of defining which types of behaviors are viewed as relevant to particular kinds of motivation. The females had an r of .444 between "sex role fulfillment" motive ratings and "making friends" motive ratings and an r of .303 between "problem solving" motive ratings and "achievement" motive ratings. These were the only two statistically significant (.05 level) correlations between motive ratings for the females. The males had three significant correlations. "Sex Role" motive rating was correlated .321 with "Thrill" motive ratings and .296 with "Making Friends." "Friends" motive rating was also correlated .281 with "achievement" motive rating.

These outcomes suggest the not surprising possibility that females see "making friends" as part of their sex role and view "achievement" as a matter of solving immediate problems. Males see both "thrill seeking" and "friendship" as part of their sex role and see "friendship" as contributing to their personal "achievement." While this information is unlikely to add much to our available knowledge it is so consistent with what is known about sex differences in motivation that it gives some credibility to the validity of the motive ratings.

Table 83 lists the significant (.05 level) correlations between the motive ratings and other ratings for both sexes. Males who were highly motivated for thrills and pleasure saw more personal achievement gain from sex and use of marijuana and less such gain from cigarette smoking. These males also saw more gain from sex for thrills and fulfilling their sex role, and less gain from smoking cigarettes in the form of thrills or sex role fulfillment.

Females who were highly motivated for thrills actually did engage in more sexual activity (see page 159) and they viewed sex as a means to achieving their long term goals ("getting a man," "making a family," etc.). They also expected less thrill from the use of opiates. Again, it is no surprise to find that youth who are pleasure-oriented find sex to be a major source of satisfaction. However, in defense of the young, both sexes who are pleasure-oriented see sexual behavior as a means to long-run achievement and not just as a passing fancy. This outcome fits well with the findings of Kinsey and others that most middle-class youth engage in sex as part of serious relationships which often lead to marriage. It is more interesting to find that males who are pleasure-motivated find that marijuana contributes to their "achievement" goal but see tobacco as being against such goals.

There were no significant correlations between the "making friends" motive rating and other ratings for the females. The "friendly" males generally saw less gains of most types from the use of opiates and pills. They did think that alcohol would contribute to making friends and that sex was a risky endeavor.

As can be seen in Table 83 the male and females nearly reversed the "making friends" pattern on the "sex role" ratings. Apparently, "friendly" males view the use of the more dangerous drugs as jeopardizing friendships while it is the females who want to be "feminine" that see less gain in the more dangerous drugs.

As was noted above females tend to see solution of immediate problems as "achievement." This is reflected in the fact that there were no significant correlations for the females between the achievement motive and other ratings. The problem solving motive rating, however, correlated significantly with several other ratings. The females who are most motivated to solve problems find more risk in opiates and have a general tendency to expect less gain from drug use.

Males who are motivated highly toward problem solving see less risk in sex and use of pills (the type of pills was unspecified, see Appendix IV). They also expect more problem solving gain from sex and less thrill from smoking. The male pattern for the achievement motive is similar to that which the females had for problem solving.

The picture which emerges from these findings is that "pleasure" and "friendship" are the major motives for drug use in the college sample. This pattern also reflected in the school group results (see page 176). At the college level the males, at least, seem to have turned away from cigarettes to marijuana if they want thrills, and "friendly" males find alcohol a help toward friendship.

Alcohol is the only drug that was positively related to motive gains by the females but these relationships did not quite reach statistical significance (see Table 83).

Risk Ratings: The correlations between the risk ratings for the college sample are shown in Table 84. There are generally positive correlations between most of the risk ratings including those for such behaviors as "speeding" and contact sports. The highest relationships are again between types of drug use.

Risk and Gain Ratings: The same general trend toward inverse or negative correlations between "risk" and "gain" ratings as was found for the school groups was also apparent in the college sample. These results will not be presented in detail here.

TABLE 31.

Factors - Injury Risk Ratings - Junior High Males - Coronado, 1969

1 (F-1)		1 (F-3)		3 (F-2)		4 (F-4)		5 (F-5)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Mainlining	.881	Cigars	.827	Protesting	.783	Homosex Acts	.834	Moving	.812
L.S.D.	.855	Stealing	.734	Football	.715	Stealing - Cars	.693	Pep Pills	.350
Heroin	.759	Cheating	.650	Drag Racing	.687	Marriage	.456	Driving	-.276
Sniffing	.713	Beer	.623	Gang Fighting	.665	Cheating	.359	Heroin	-.322
Marijuana	.636	Pep Pills	.481	Fighting (2)	.612	Abortion	.327	Marijuana	-.351
Pep Pills	.630	Liquor	.477	Motorcycling	.554	Football	.270		
Abortion	.584	Motorcycling	.433	Driving	.476	Fighting (2)	-.307		
Liquor	.539	Marriage	.418	Sex	.373				
Cigarettes	.496	Marijuana	.335	Liquor	.369				
Stealing - Cars	.417	Gang Fighting	.316	Beer	.356				
Sex	.306	Sniffing	.309	Cigarettes	.294				
Motorcycling	.269								

TABLE 32.

Factors - Self Respect Risk Ratings - Junior High Males - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-5)		4 (F-3)		5 (F-4)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Heroin	.844	Protesting	.855	Moving	.676	Motorcycling	.721	Stealing - Cars	.692
Mainlining	.811	Football	.708	Fighting (2)	.606	Cheating	.683	Gang Fighting	.667
L.S.D.	.792	Drag Racing	.698	Sex	.488	Stealing	.680	Homosex Acts	.630
Marijuana	.770	Driving	.597	Abortion	.475	Liquor	.659	Cheating	.472
Pep Pills	.727	Beer	.313	Football	.468	Beer	.639	Heroin	.278
Sniffing	.681	Cigarettes	.312	Gang Fighting	.258	Cigarettes	.612	Drag Racing	.251
Marriage	.574					Cigars	.547	Driving	-.325
Cigarettes	.487					Fighting (2)	.529		
Cigars	.471					Marijuana	.449		
Homosex Acts	.457					Sniffing	.373		
Abortion	.457					Marriage	.349		
Liquor	.395					Mainlining	.322		
Sex	.376					Stealing - Cars	.292		
Motorcycling	.286					Sex	.259		
						Pep Pills	.256		

TABLE 33.

Factors - Loss of Friends Risk Ratings - Junior High Males - Coronado, 1969

1 (F-1)		2 (F-4?)		3 (F-5?/F-4?)		4 (F-2)		5 (F-3)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Mainlining	.860	Drag Racing	.708	Sex	.809	Football	.790	Cheating	.751
L.S.D.	.846	Driving	.706	Marriage	.725	Moving	.525	Stealing - Cars	.751
Sniffing	.736	Cigars	.685	Gang Fighting	.476	Protesting	.523	Stealing	.712
Pep Pills	.717	Protesting	.639	Liquor	.464	Gang Fighting	.354	Motorcycling	.563
Heroin	.710	Beer	.561	Fighting (2)	.422	Drag Racing	.325	Fighting (2)	.554
Marijuana	.700	Cigars	.504	Homosex Acts	.416			Liquor	.529
Homosex Acts	.440	Stealing	.430	Beer	.299			Abortion	.506
Marriage	.409	Liquor	.364	Cigarettes	.284			Beer	.497
Cigarettes	.383	Sniffing.	.338	Abortion	.278			Gang Fighting	.488
Cigars	.381	Pep Pills	.316	Cigars	.261			Cigarettes	.473
Liquor	.381	Motorcycling	.292	Moving	-.465			Marijuana	.419
Abortion	.364	Homosex Acts	-.296					Sniffing	.353
Cheating	.330							Sex	.349
Beer	.327							Heroin	.329
Stealing	.303							Pep Pills	.314
								Mainlining	.272

TABLE 34.

Factors - Trouble With Law Risk Ratings - Junior High Males - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-5)		4 (F-3?)		5 (F-4?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.876	Fighting (2)	.751	Moving	.714	Beer	.729	Cigarettes	.770
Heroin	.861	Drag Racing	.727	Football	.597	Cheating	.640	Sniffing	.704
Mainlining	.827	Driving	.693	Marriage	.592	Homosex Acts	.622	Pep Pills	.533
Marijuana	.631	Stealing	.633	Cigars	.406	Motorcycling	.609	Cigars	.516
Sex	.592	Protesting	.561	Abortion	-.382	Liquor	.598	Abortion	.440
Abortion	.581	Gang Fighting	.529			Stealing - Cars	.576	Beer	.414
Liquor	.472	Football	.503			Gang Fighting	.541	Liquor	.310
Stealing - Cars	.458	Motorcycling	.393			Marijuana	.536	Driving	.286
Pep Pills	.452	Cigarettes	.339			Cigars	.532	Fighting (2)	.262
Homosex Acts	.352	Marriage	.331			Pep Pills	.346		
Gang Fighting	.322	Pep Pills	.257			Protesting	.333		
Marriage	.307					Sex	.315		
Sniffing	.272					Sniffing	.300		

TABLE 35.

Factors - Injury Risk Ratings - Junior High Females - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-3?)		4 (F-5)		5 (F-4?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Pep Pills	.880	Football	.729	Stealing	.860	Moving	.799	Driving	.782
L.S.D.	.851	Protesting	.468	Cheating	.829	Marriage	.388	Fighting (2)	.610
Marijuana	.813	Cigarettes	.300	Stealing - Cars	.751	Sex	.272	Protesting	.576
Heroin	.785	Beer	.255	Motorcycling	.714	Cigarettes	.258	Marriage	.409
Liquor	.740	Mainlining	-.302	Beer	.553	Abortion	-.272	Drag Racing	.305
Sniffing	.719	Marriage	-.351	Marriage	.398	Mainlining	-.293	Abortion	.391
Cigars	.714	Heroin	-.363	Cigars	.397	Heroin	-.306		
Mainlining	.701	L.S.D.	-.393	Homosex Acts	.393	Sniffing	-.425		
Sex	.676	Homosex Acts	-.577	Gang Fighting	.391	Fighting (2)	-.546		
Drag Racing	.660			Liquor	.338	Gang Fighting	-.552		
Cigarettes	.619			Cigarettes	.308				
Beer	.558			Mainlining	.274				
Abortion	.459			Fighting (2)	.267				
Gang Fighting	.416			Pep Pills	.262				
Marriage	.382			Marijuana	.246				
Stealing - Cars	.368								
Motorcycling	.320								
Homosex Acts	.317								

TABLE 36.

Factors - Self Respect Risk Ratings - Junior High Females - Coronado, 1969

1 (F-1)		2 (F-5?)		3 (F-3?)		4 (F-4)		5 (F-2?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Mainlining	.878	Marriage	.842	Cigars	.796	Homosex Acts	.831	Motorcycling	.658
Heroin	.877	Moving	.622	Cigarettes	.788	Sex	.785	Sniffing	.645
L.S.D.	.844	Driving	.524	Beer	.750	Abortion	.745	Cheating	.514
PepPills	.618	Fighting (2)	.507	Marijuana	.665	Gang Fighting	.463	Gang Fighting	.482
Stealing - Cars	.608	Football	.456	Drag Racing	.597	Stealing	.441	Stealing - Cars	.472
Cheating	.602	Protesting	.427	Liquor	.589	L.S.D.	.362	Stealing	.462
Marijuana	.553	Drag Racing	.392	Protesting	.559	Cheating	.266	Football	.462
Liquor	.535	Gang Fighting	.251	Driving	.534	Mainlining	.261	Fighting (2)	.419
Sniffing	.445			Pep Pills	.494	Moving	-.267	Drag Racing	.326
Abortion	.443			Stealing	.391	Football	-.431	Cigarettes	.256
Gang Fighting	.425			Motorcycling	.387			Pep Pills	.253
Stealing	.380			Fighting (2)	.308				
Beer	.343			Sniffing	.300				
				Sex	.294				

TABLE 37.

Factors - Loss of Friends Risk Ratings - Junior High Females - Coronado, 1969

1 (F-1)		2 (F-3)		3 (F-2)		4 (F-4)		5 (F-5)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Marijuana	.903	Protesting	.680	Football	.808	Homosex Acts	.745	Moving	.936
Pep Pills	.863	Motorcycling	.660	Fighting (2)	.389	Gang Fighting	.719	Cigars	.512
Liquor	.808	Driving	.657	Pep Pills	-.300	Abortion	.665	Drag Racing	.357
Sniffing	.789	Cheating	.637	Cheating	-.336	Sex	.570	Beer	.354
L.S.D.	.731	Drag Racing	.583	Abortion	-.422	Fighting (2)	.563	Cigars	.314
Beer	.723	Fighting (2)	.569	Stealing - Cars	-.466	Stealing - Cars	.452		
Cigars	.671	Cigarettes	.563	Stealing	-.481	Cheating	.395		
Mainlining	.641	Stealing	.497	Mainlining	-.531	Marriage	.323		
Heroin	.604	Marriage	.441	L.S.D.	-.542	Heroin	.293		
Cigarettes	.537	Stealing - Cars	.375	Heroin	-.587	Stealing	.256		
Sex	.492	Beer	.304			Mainlining	.251		
Motorcycling	.396	Liquor	.297						
Marriage	.394	Gang Fighting	.265						
Stealing - Cars	.360	Cigars	.259						
Drag Racing	.359								
Abortion	.294								
Stealing	.286								
Homosex Acts	.258								

TABLE 38.

Factors - Trouble With Law Risk Ratings - Junior High Females - Coronado, 1969

1 (F-1)		2 (F-3)		3 (F-4)		4 (F-5)		5 (F-2)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.947	Fighting (2)	.806	Sex	.838	Moving	.692	Driving	.783
Heroin	.915	Beer	.657	Homosex Acts	.766	Beer	.338	Protesting	.692
Mainlining	.853	Liquor	.582	Marriage	.744	Cigars	.298	Drag Racing	.604
Abortion	.847	Gang Fighting	.552	Cigars	.369	Marriage	.258	Cigarettes	.504
Marijuana	.838	Sniffing	.512	Motorcycling	.308	Sex	-.252	Cigars	.409
Pep Pills	.734	Stealing	.498	Beer	.305	Mainlining	-.254	Marriage	.355
Stealing - Cars	.710	Cigars	.497	Stealing	.251	Abortion	-.276	Stealing	.346
Sniffing	.649	Cheating	.428	Drag Racing	-.271	Gang Fighting	-.314	Cheating	.281
Gang Fighting	.486	Motorcycling	.420			Stealing	-.336	Stealing - Cars	.263
Liquor	.436	Cigarettes	.379			Motorcycling	-.406	Gang Fighting	.257
Cheating	.423	Drag Racing	.335						
Cigarettes	.388	Marijuana	.331						
Beer	.382	Stealing - Cars	.294						
Stealing	.348	Pep Pills	.283						
Cigars	.324	Mainlining	.265						

TABLE 39.

Factors - Injury Risk Ratings - Senior High Males - Coronado, 1969

1 (F-3)		2 (F-1)		3 (F-2)		4 (F-4?)		5 (F-4?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Cigars	.737	Pep Pills	.717	Protesting	.773	Stealing - Cars	.814	Marriage	.671
Motorcycling	.733	L.S.D.	.690	Driving	.770	Stealing	.717	Sex	.663
Beer	.678	Mainlining	.684	Football	.627	Cheating	.618	Abortion	.531
Liquor	.547	Marijuana	.643	Drag Racing	.613	Heroin	.505	Fighting (2)	.521
Cigarettes	.493	Gang Fighting	.565	Homosex Acts	.305	Sniffing	.450	Sniffing	.478
Cheating	.409	Heroin	.527	Sniffing	.300	Moving	.436	Homosex Acts	.400
Fighting (2)	.355	Liquor	.490	Abortion	.298	Marriage	.425	Pep Pills	.271
Protesting	.344	Sex	.308	Gang Fighting	.262	Homosex Acts	.336	Marijuana	.265
Marijuana	.273					Drag Racing	.287		
Drag Racing	.242					Beer	.254		
Stealing - Cars	.272								

TABLE 40.

Factors - Self Respect Risk Ratings - Senior High Males - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-4)		4 (F-3)		5 (F-5)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.775	Protesting	.758	Homosex Acts	.763	Cigars	.771	Cheating	.674
Pep Pills	.763	Football	.714	Abortion	.580	Driving	.685	Stealing - Cars	.453
Mainlining	.741	Gang Fighting	.696	Heroin	.412	Cigarettes	.683	Stealing	.343
Marijuana	.709	Drag Racing	.683	Fighting (2)	.367	Beer	.616	Motorcycling	.339
Liquor	.692	Fighting (2)	.664	Mainlining	.359	Sex	.604	Fighting (2)	.305
Stealing	.675	Marriage	.325	Marriage	.281	Motorcycling	.587	Gang Fighting	.267
Stealing - Cars	.624	Beer	.325			Drag Racing	.479	Abortion	-.280
Heroin	.599	Driving	.297			Marijuana	.427	Football	-.397
Sniffing	.582	Sniffing	.293			Protesting	.391	Moving	-.666
Marriage	.437	Liquor	.292			Liquor	.379		
Cheating	.399					L.S.D.	.307		
Gang Fighting	.371					Pep Pills	.306		
Sex	.311					Abortion	.263		
Cigarettes	.269								
Cigars	.260								

TABLE 41.

Factors - Loss of Friends Risk Ratings - Senior High Males - Coronado, 1969

1 (F-3)		2 (F-2?/F-5?)		3 (F-4?)		4 (F-1)		5 (F-2?/F-5?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Cigarettes	.771	Football	.746	Sniffing	.719	Heroin	.803	Homosex Acts	.849
Stealing	.751	Drag Racing	.697	Abortion	.701	Mainlinine	.758	Marijuana	-.278
Stealing - Cars	.724	Beer	.598	Pep Pills	.677	L.S.D.	.730	Football	-.334
Motorcycling	.708	Driving	.590	Marijuana	.626	Sex	.529	Driving	-.513
Cigars	.691	Liquor	.450	Marriage	.516	Stealing - Cars	.384		
Cheating	.580	Cigars	.390	L.S.D.	.337	Fighting (2)	.352		
Beer	.554	Sex	.350	Mainlining	.308	Gang Fighting	.344		
Gang Fighting	.545	Fighting (2)	.335	Motorcycling	.303	Pep Pills	.299		
Liquor	.506	Moving	-.470	Cheating	.299	Cheating	.292		
Marijuana	.487			Liquor	.281	Marijuana	.284		
Fighting (2)	.483			Driving	.278	Moving	-.319		
Pep Pills	.470								
L.S.D.	.357								
Sniffing	.296								
Heroin	.265								
Drag Racing	.254								
Mainlining	.251								

TABLE 42.

Factors - Trouble With Law Risk Ratings - Senior High Males - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-3)		4 (F-4)		5 (F-5?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Stealing - Cars	.798	Protesting	.850	Cigars	.758	Abortion	.717	Fighting (2)	.791
Heroin	.748	Driving	.736	Beer	.755	Homosex Acts	.571	Cheating	.537
Mainlining	.729	Football	.630	Cigarettes	.711	Pep Pills	.543	Marriage	.490
Gang Fighting	.694	Moving	.629	Motorcycling	.671	Sniffing	.526	Sex	.349
Marijuana	.692	Beer	.302	Liquor	.650	Drag Racing	.514	Sniffing	.270
Stealing	.575	Motorcycling	.302	Stealing	.496	L.S.D.	.510		
L.S.D.	.516	Marriage	.265	Sniffing	.442	Marriage	.498		
Cheating	.498	Pep Pills	-.254	Pep Pills	.439	Mainlining	.488		
Liquor	.401	Sniffing	-.316	Homosex Acts	.331	Heroin	.394		
Pep Pills	.386	Homosex Acts	-.406	Sex	.313	Sex	.287		
Abortion	.306			L.S.D.	.292	Stealing	.284		
Cigarettes	.301					Football	-.262		
Sniffing	.259								

TABLE 43.

Factors - Injury Risk Ratings - Senior High Females - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-3)		4 (F-4?/F-5?)		5 (F-4?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Mainlining	.782	Driving	.750	Cigars	.737	Stealing	.694	Marriage	.724
L.S.D.	.735	Protesting	.633	Pep Pills	.628	Homosex Acts	.643	Sex	.666
Heroin	.698	Football	.581	Motorcycling	.578	Moving	.584	Cheating	.626
Marijuana	.559	Gang Fighting	.530	Beer	.576	Stealing - Cars	.473	Abortion	.530
Sniffing	.533	Motorcycling	.461	Cigarettes	.575	Cheating	.415	Stealing - Cars	.522
Gang Fighting	.430	Beer	.434	Marijuana	.538	Gang Fighting	.337	Liquor	.289
Pep Pills	.373	Liquor	.420	Liquor	.485	Drag Racing	-.292	Marijuana	.259
Stealing	.370	Drag Racing	.414	L.S.D.	.386			Drag Racing	.224
Motorcycling	.328	L.S.D.	-.248	Moving	.353				
		Homosex Acts	-.296	Football	.329				
				Sex	.253				

TABLE 44.

Factors - Self Respect Risk Ratings - Senior High Females - Coronado, 1969

1 (F-1)		2 (F-3)		3 (F-4?)		4 (F-5?/F-3?)		5 (F-2)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.906	Fighting (2)	.805	Abortion	.837	Stealing	.692	Beer	.756
Mainlining	.815	Cheating	.695	Sex	.550	Drag Racing	.542	Driving	.693
Marijuana	.754	Gang Fighting	.663	Pep Pills	.259	Cigars	.486	Liquor	.630
Pep Pills	.750	Stealing - Cars	.659	Moving	-.395	Gang Fighting	.416	Protesting	.588
Heroin	.737	Homosex Acts	.590	Football	-.797	Sniffing	.385	Cigars	.526
Sniffing	.641	Heroin	.374			Cigarettes	.361	Marriage	.465
Cigarettes	.544	Stealing	.324			Beer	.319	Sex	.420
Motorcycling	.483	Moving	.319			Fighting (2)	.307	Marijuana	.405
Sex	.457	Sniffing	.288			Protesting	.251	Cigarettes	.402
Drag Racing	.417	Mainlining	.287			Moving	-.585	Motorcycling	.364
Marriage	.372	Liquor	.268					Pep Pills	.318
Stealing - Cars	.336							Drag Racing	.259
Homosex Acts	.321								
Cheating	.305								
Cigars	.287								
Liquor	.278								

TABLE 45.

Factors - Loss of Friends Risk Ratings - Senior High Females - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-4)		4 (F-3)		5 (F-5)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.866	Football	.794	Gang Fighting	.819	Cigars	.793	Moving	.720
Mainlining	.849	Protesting	.710	Fighting (2)	.816	Beer	.766	Sex	.593
Heroin	.840	Driving	.664	Stealing - Cars	.510	Cigarettes	.715	Abortion	.463
Pep Pills	.823	Drag Racing	.580	Stealing	.464	Motorcycling	.575	Protesting	.394
Marijuana	.737	Fighting (2)	.314	Liquor	.459	Liquor	.547	Stealing - Cars	.344
Sniffing	.725	Motorcycling	.272	Homosex Acts	.370	Sniffing	.454	Homosex Acts	.332
Stealing - Cars	.585	Liquor	.254	Cheating	286	Cheating	.431		
Cheating	.574	Marijuana	.205	Heroin	.255	Sex	.384		
Stealing	.563	Homosex Acts	-.451			Marijuana	.375		
Abortion	.548					Stealing	.321		
Marriage	.513					Gang Fighting	.319		
Drag Racing	.436					Pep Pills	.277		
Sex	.426								
Motorcycling	.424								
Cigarettes	.381								
Liquor	.340								
Homosex Acts	.332								

TABLE 46.

Factors - Trouble With Law Risk Ratings - Senior High Females - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-3)		4 (F-5)		5 (F-4?/F-3?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Heroin	.907	Drag Racing	.679	Motorcycling	.696	Moving	.804	Beer	.790
L.S.D.	.903	Football	.628	Stealing	.651	Driving	.591	Cigars	.683
Mainlining	.875	Protesting	.623	Marriage	.610	Protesting	.406	Driving	.576
Abortion	.824	Sex	.592	Cheating	.573	Stealing - Cars	.305	Cigarettes	.506
Marijuana	.653	Sniffing	.585	Gang Fighting	.505	Cigarettes	-.291	Sniffing	.358
Pep Pills	.607	Cigarettes	.481	Fighting (2)	.468			Liquor	.342
Homosex Acts	.542	Liquor	.473	Liquor	.465			Stealing	.334
Stealing - Cars	.533	Marriage	.354	Stealing - Cars	.432			Pep Pills	.332
Cheating	.495	Gang Fighting	.323	Homosex Acts	.410			Fighting (2)	.319
Gang Fighting	.475			Marijuana	.406			Marijuana	.255
Sniffing	.340			Cigars	.406				
Football	-.291			Pep Pills	.384				
Protesting	-.324			Cigarettes	.354				
				Sniffing	.275				

TABLE 47.

Factors - Adult Feeling Gain - Junior High Males - Coronado, 1969

1 (F-3)		2 (F-2)		3 (F-4)		4 (F-1)		5 (F-5)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Cigars	.824	Football	.760	Protesting	.726	Mainlining	.920	Moving	.824
Stealing	.711	Protesting	.633	Marriage	.665	Heroin	.862	Protesting	.401
Stealing - Cars	.651	Pep Pills	.591	Gang Fighting	.619	L.S.D.	.840	Motorcycling	.341
Sniffing	.651	Fighting (2)	.417	Liquor	.616	Marijuana	.761	Football	.263
Cigarettes	.595	Beer	.379	Homosex Acts	.601	Pep Pills	.612	Driving	-.272
Pep Pills	.529	Homosex Acts	-.493	Sex	.588	Sniffing	.506	Stealing - Cars	-.286
Abortion	.512			Cheating	.587	Sex	.500		
Beer	.491			Cigarettes	.425	Fighting (2)	.432		
Gang Fighting	.456			Marijuana	.417	Liquor	.405		
Drag Racing	.417			Beer	.411	Abortion	.349		
Liquor	.402			Fighting (2)	.348	Stealing - Cars	.318		
Cheating	.327			Abortion	.292	Gang Fighting	.285		
L.S.D.	.318			Stealing	.280	Marriage	.272		
Homosex Acts	.283			Heroin	.256	Cigars	.264		
Motorcycling	.267					Beer	.258		
Fighting (2)	.262					Protesting	.254		
Heroin	.259					Stealing	.251		

TABLE 48.

Factors - Friends Gain - Junior High Males - Coronado, 1969

1 (F-1)		2 (F-4)		3 (F-2)		4 (F-5)		5 (F-3)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.922	Stealing - Cars	.784	Driving	.775	Moving	.726	Stealing	.654
Heroin	.873	Fighting (2)	.760	Drag Racing	.743	Motorcycling	.687	Pep Pills	.645
Mainlining	.838	Homosex Acts	.730	Protesting	.534	Sex	.438	Cheating	.582
Marijuana	.745	Gang Fighting	.673	Football	.467	Beer	.430	Cigars	.573
Sniffing	.609	Marriage	.552	Fighting (2)	.330	Marriage	.377	Liquor	.474
Liquor	.540	Beer	.482	Cigars	.289	Football	.378	Protesting	.437
Pep Pills	.422	Sex	.475	Cigarettes	.281	Stealing	.255	Cigarettes	.424
Cigarettes	.410	Cheating	.444	Sniffing	.268	Sniffing	-.328	Sniffing	.357
Cheating	.349	Liquor	.411	Abortion	-.358	Abortion	-.442	Gang Fighting	.309
Driving	-.292	Marijuana	.391					Sex	.308
Football	-.414	Cigars	.339					Abortion	.300
		Motorcycling	.333					Beer	.291
		Cigarettes	.330						
		Stealing	.300						
		Abortion	.290						

TABLE 49.

Factors - Thrill or Excitement Gain - Junior High Males - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-4?/F-5?)		4 (F-3?/F-4?)		5 (F-3?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Heroin	.901	Drag Racing	.743	Homosex Acts	.725	Stealing - Cars	.610	Cigarettes	.764
Mainlining	.892	Football	.735	Moving	.627	Motorcycling	.672	Sniffing	.686
L.S.D.	.882	Driving	.732	Abortion	.605	Sex	.627	Stealing	.631
Pep Pills	.809	Protesting	.714	Beer	.522	Gang Fighting	.568	Gang Fighting	.538
Marijuana	.775	Fighting (2)	.296	Marriage	.413	Cigars	.439	Cheating	.496
Liquor	.698	Cigarettes	.268	Fighting (2)	.401	Stealing	.393	Stealing - Cars	.423
Beer	.695			Cheating	.392	Fighting (2)	.377	Abortion	.410
Cigars	.666			Motorcycling	.349	Drag Racing	.354	PepPills	.347
Marriage	.548			Liquor	.273	Liquor	.333	Fighting	.256
Sniffing	.526			Cigars	.269	Marijuana	.309		
Cheating	.471			Drag Racing	-.254	Marriage	.284		
Fighting (2)	.450								
Sex	.385								
Driving	.319								
Cigarettes	.293								
Gang Fighting	.282								

TABLE 50.

Factors - Good Feeling Inside Gain - Junior High Males - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-4)		4 (F-5?)		5 (F-3)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.923	Protesting	.850	Cheating	.802	Marriage	.786	Driving	.732
Mainlining	.903	Football	.797	Stealing - Cars	.754	Gang Fighting	.556	Motorcycling	.469
Heroin	.881	Drag Racing	.701	Stealing	.740	Sex	.536	Cigars	.353
Marijuana	.871	Driving	.381	Abortion	.719	Liquor	.454	Fighting (2)	.342
Pep Pills	.794	Stealing	.281	Cigarettes	.690	Homosex Acts	.349	Pep Pills	.295
Beer	.720	Fighting (2)	.273	Homosex Acts	.662	Moving	.323	Stealing - Cars	.273
Liquor	.668	Sex	.253	Fighting (2)	.617			Drag Racing	.265
Sex	.630	Abortion	.374	Sniffing	.585			Cheating	.253
Sniffing	.630			Moving	.564			Cigarettes	.268
Cigars	.572			Gang Fighting	.564				
Motorcycling	.440			Cigars	.512				
Liquor	.376			Beer	.423				
Stealing	.351			Motorcycling	.310				
Stealing - Cars	.326			Liquor	.343				
Cigarettes	.325								
Cheating	.265								
Marriage	.260								

TABLE 51.

Factors - Adult Feeling Gain - Junior High Females - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-5)		4 (F-4?)		5 (F-3?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Cigars	.845	Protesting	.760	Moving	.865	Stealing	.732	Sex	.845
Heroin	.834	Driving	.685	Football	.526	Homosex Acts	.727	Abortion	.464
L.S.D.	.822	Drag Racing	.672	Driving	-.292	Stealing - Cars	.567	Liquor	.455
Mainlining	.820	Motorcycling	.617	Abortion	-.322	Abortion	.560	Motorcycling	.443
Pep Pills	.760	Fighting (2)	.611	Cigarettes	-.577	Cheating	.488	Homosex Acts	.424
Beer	.757	Football	.609			Sniffing	.362	Marijuana	.424
Cheating	.708	Cigarettes	.431			Mainlining	.362	Pep Pills	.379
Liquor	.695	Gang Fighting	.418			Gang Fighting	.358	Marriage	.334
Marijuana	.683	Heroin	.257			Fighting (2)	.298	Football	.296
Sniffing	.643	Stealing	.256					Cigarettes	.294
Stealing - Cars	.595							Sniffing	.265
Drag Racing	.379							Beer	.257
Marriage	.367								
Protesting	.317								
Fighting (2)	.317								
Gang Fighting	.316								
Cigarettes	.263								
Football	-.273								

TABLE 52.

Factors 0 Friends Gain - Junior High Females - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-3)		4 (F-5)		5 (F-4)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.910	Driving	.804	Fighting (2)	.858	Marriage	.786	Homosex Acts	.780
Heroin	.851	Football	.777	Gang Fighting	.708	Sex	.444	Abortion	.775
Cigars	.842	Protesting	.751	Stealing	.688	Cigarettes	.362	Sex	.602
Liquor	.822	Drag Racing	.630	Cheating	.626	Marijuana	.342	Stealing - Cars	.546
Mainlining	.813	Gang Fighting	.321	Motorcycling	.547	Cheating	.322	Stealing	.462
Beer	.805			Stealing - Cars	.525	Pep Pills	.316	Sniffing	.443
Marijuana	.742			Cigarettes	.458	Moving	-.392	Heroin	.394
Sniffing	.740			Beer	.354			L.S.D.	.286
Pep Pills	.735			Mainlining	.339			Moving	.278
Cigarettes	.629			Pep Pills	.293			Gang Fighting	.261
Motorcycling	.528			Homosex Acts	.267			Liquor	.259
Stealing - Cars	.470								
Cheating	.442								
Stealing	.411								
Abortion	.395								
Drag Racing	.390								
Sex	.340								
Homosex Acts	.299								
Gang Fighting	.272								
Protesting	.270								
[illegible]	-.[illegible]								

TABLE 53.

Factors - Thrill or Excitement Gain - Junior High Females - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-4?/F-3?)		4 (F-2?/F-3?)		5 (F-5)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Pep Pills	.902	Driving	.831	Stealing - Cars	.766	Football	.863	Moving	.702
L.S.D.	.889	Protesting	.821	Cheating	.749	Motorcycling	.590	Abortion	.510
Marijuana	.874	Cigarettes	.641	Stealing	.738	Gang Fighting	.452	Sex	.496
Heroin	.846	Drag Racing	.624	Gang Fighting	.736	Drag Racing	.431	Homosex Acts	.478
Liquor	.816	Marriage	.534	Fighting (2)	.681	Fighting (2)	.347	Stealing	.300
Mainlining	.807	Beer	.457	Homosex Acts	.552	Sex	.346		
Sniffing	.804	Cigars	.391	Cigars	.498	Marriage	.250		
Beer	.629			Mainlining	.439	Abortion	-.295		
Sex	.561			Cigarettes	.383				
Cigars	.545			Beer	.344				
Abortion	.544			Motorcycling	.292				
Homosex Acts	.477			Liquor	.282				
Marriage	.404			Abortion	.259				
Cigarettes	.401								
Motorcycling	.343								
Stealing - Cars	.330								
Drag Racing	.299								
Stealing	.289								
Cheating	.267								
Fighting (2)	.256								

TABLE 54.

Factors - Good Feeling Inside Gain - Junior High Females - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-4?/F-3?)		4 (F-3?)		5 (F-5)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Pep Pills	.867	Protesting	.890	Homosex Acts	.829	Sex	.727	Moving	.883
Heroin	.866	Drag Racing	.768	Abortion	.816	Marriage	.688	Cheating	.426
Mainlining	.850	Driving	.736	Stealing	.764	Marijuana	.464	Gang Fighting	.395
L.S.D.	.827	Motorcycling	.604	Cheating	.667	L.S.D.	.387	Football	.363
Liquor	.797	Football	.519	Gang Fighting	.621	Pep Pills	.385	Fighting (2)	.287
Beer	.760	Cigarettes	.498	Stealing - Cars	.579	Football	.280	Sniffing	-.283
Cigars	.734	Fighting (2)	.414	Fighting (2)	.572	Abortion	.257	Abortion	-.315
Marijuana	.713	Beer	.378	Cigarettes	.355				
Sniffing	.690	Gang Fighting	.345	Cigars	.342				
Cigarettes	.669	Stealing	.274	Mainlining	.313				
Gang Fighting	.451	Liquor	.257	Sex	.297				
Stealing - Cars	.415	Cigars	.253	Heroin	.293				
Marriage	.399								
Fighting	.387								
Sex	.365								
Cheating	.327								
Stealing	.315								
Motorcycling	.302								
Homosex Acts	.267								
Drag Racing	.266								

TABLE 55.

Factors - Adult Feeling Gain - Senior High Males - Coronado, 1969

1 (F-1)		2 (F-2?)		3 (F-3?)		4 (F-4?)		5 (F-2?/F-5?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Mainlining	.850	Sex	.783	Gang Fighting	.761	Abortion	.763	Football	.796
L.S.D.	.849	Protesting	.751	Fighting (2)	.665	Stealing	.755	Cigars	.656
Heroin	.770	Driving	.651	Homosex Acts	.589	Sniffing	.633	Moving	.554
Marijuana	.757	Liquor	.650	Marriage	.452	Homosex Acts	.629	Beer	.541
Pep Pills	.653	Drag Racing	.633	Cigarettes	.438	Cheating	.518	Cigarettes	.432
Stealing - Cars	.636	Beer	.596	Liquor	.416	Stealing - Cars	.472	Driving	.409
Cheating	.545	Motorcycling	.527	Cigars	.305	Motorcycling	.334	Liquor	.304
Sniffing	.470	Pep Pills	.464	Heroin	.298	Moving	.297	Marriage	.292
Stealing	.295	Marijuana	.390	Drag Racing	.241			Protesting	.268
Beer	.280	Marriage	.387						
		Cigars	.343						

TABLE 56.

Factors - Friends Gain - Senior High Males - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-4?)		4 (F-3)		5 (F-4?/F-5?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Mainlining	.862	Football	.794	Sniffing	.844	Cigars	.736	Moving	.720
Heroin	.835	Driving	.715	Pep Pills	.721	Motorcycling	.726	Homosex Acts	.513
L.S.D.	.779	Drag Racing	.698	Stealing	.530	Beer	.580	Fighting (2)	.351
Gang Fighting	.729	Protesting	.690	Cigarettes	.568	Fighting (2)	.562	Abortion	.341
Marijuana	.703	Sex	.660	Stealing - Cars	.455	Protesting	.417	Cigarettes	.319
Marriage	.695	Beer	.624	Marijuana	.387	Stealing	.409	Driving	.267
Cheating	.689	Marriage	.506	Driving	.368	Cigarettes	.343		
Liquor	.645	Liquor	.470	Cheating	.323	L.S.D.	.301		
Stealing - Cars	.641	Moving	.397			Heroin	.285		
Abortion	.638	Fighting (2)	.276			Mainlining	.281		
Pep Pills	.530	Cigarettes	.269			Cheating	.272		
Sex	.439	Cigars	.265			Homosex Acts	.270		
Fighting (2)	.410					Drag Racing	.260		
Cigars	.309					Abortion	-.281		
Homosex Acts	.291								

TABLE 57.

Factors - Thrill or Excitement Gain - Senior High Males - Coronado, 1969

1 (F-1)		2 (F-2?/F-3?)		3 (F-3?/F-2?)		4 (F-5)		5 (F-4)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Mainlining	.907	Cigars	.884	Fighting (2)	.857	Homosex Acts	.662	Abortion	.773
Heroin	.898	Cigarettes	.787	Gang Fighting	.703	Moving	.641	Cheating	.557
L.S.D.	.833	Beer	.764	Marriage	.685	Football	.456	Stealing	.535
Pep Pills	.773	Liquor	.695	Drag Racing	.521	Marijuana	-.395	Stealing - Cars	.442
Marijuana	.748	Motorcycling	.485	Stealing - Cars	.493			Sniffing	.311
Sniffing	.631	Driving	.472	Football	.468			Pep Pills	.310
Liquor	.383	Protesting	.440	Driving	.400			Motorcycling	.294
Motorcycling	.350	Cheating	.416	Protesting	.383			Driving	-.290
Homosex Acts	.317	Sex	.288	Cheating	.318				
Stealing - Cars	.304	Sniffing	.262	Sex	.297				
Sex	.286	Moving	.256						
Football	-.260								
Protesting	-.276								
Driving	-.343								

TABLE 58.

Factors - Good Feeling Inside Gain - Senior High Males - Coronado, 1969

1 (F-1)		2 (F-2)		3 (F-4?/F-5?)		4 (F-3?)		5 (F-4?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Heroin	.916	Drag Racing	.807	Cheating	.792	Cigarettes	.845	Liquor	.748
Mainlining	.859	Protesting	.772	Fighting (2)	.785	Cigars	.759	Sex	.689
L.S.D.	.773	Football	.617	Stealing - Cars	.784	Stealing	.622	Marijuana	.682
Sniffing	.626	Driving	.599	Gang Fighting	.551	Beer	.564	Beer	.677
Motorcycling	.594	Gang Fighting	.440	Moving	.488	Marriage	.551	Abortion	.507
Pep Pills	.544	Marriage	.316	Stealing	.414	Motorcycling	.355	Pep Pills	.412
Marijauan	.448	Sex	.256	Marriage	.281	Sniffing	.290	Stealing - Cars	.376
Cigars	.288	L.S.D.	-.285			Moving	.288	Sniffing	.364
		Pep Pills	-.296			Pep Pills	.257	L.S.D.	.297
		Stealing	-.318			Fighting (2)	-.257	Mainlining	.282
		Abortion	-.410					Cheating	.251

TABLE 59.

Factors - Adult Feeling Gain - Senior High Females - Coronado, 1969

1 (F-4?/F-3?)		2 (F-4?/F-3?)		3 (F-1)		4 (F-2)		5 (F-5?/F-2?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Gang Fighting	.829	Abortion	.733	L.S.D.	.860	Beer	.712	Protesting	.743
Homosex Acts	.808	Pep Pills	.625	Mainlining	.766	Cigarettes	.700	Moving	.647
Stealing - Cars	.773	Sniffing	.553	Heroin	.716	Motorcycling	.633	Football	.594
Cheating	.706	Drag Racing	.527	Sex	.667	Marriage	.619	Driving	.476
Fighting (2)	.675	Marijuana	.442	Marijuana	.553	Cigars	.602	Marijuana	.450
Stealing	.607	Stealing	.402	Sniffing	.473	Driving	.403	Cheating	.331
Mainlining	.419	Cigarettes	.348	Liquor	.460	Marijuana	.337	Pep Pills	.282
Drag Racing	.542	Homosex Acts	.256	Pep Pills	.442	Stealing	.324	Sniffing	.251
Sniffing	.393	Cheating	.251	Stealing - Cars	.357	Pep Pills	.322		
Heroin	.387	Driving	-.377	Beer	.300	Liquor	.301		
Football	.281			Cheating	.271	Drag Racing	.288		
Cigars	.262			Football	-.264				

TABLE 60.

Factors - Friends Gain - Senior High Females - Coronado, 1969

1 (F-1)		2 (F-3?/F-4?)		3 (F-2)		4 (F-4?/F-3?)		5 (F-5)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.913	Stealing	.852	Protesting	.736	Stealing - Cars	.820	Moving	.779
Marijuana	.825	Homosex Acts	.818	Driving	.723	Fighting (2)	.761	Marriage	.729
Heroin	.802	Abortion	.811	Football	.667	Mainlining	.366	Motorcycling	.411
Mainlining	.792	Gang Fighting	.769	Liquor	.499	Heroin	.351	Marijuana	.272
Pep Pills	.734	Cigars	.732	Drag Racing	.437	Gang Fighting	.346	Cheating	.264
Beer	.722	Sniffing	.709	Beer	.375	Homosex Acts	.329		
Motorcycling	.631	Drag Racing	.642			Driving	-.257		
Sex	.583	Cheating	.600			Cigarettes	-.332		
Liquor	.573	Pep Pills	.507						
Cigarettes	.545	Sex	.476						
Marriage	.467	Liquor	.321						
Sniffing	.370	Cigarettes	.289						
Driving	.325	Fighting (2)	.276						
Stealing - Cars	.278								

TABLE 61.

Factors - Thrill or Excitement Gain - Senior High Females - Coronado, 1969

1 (F-1)		2 (F-4)		3 (F-2)		4 (F-5)		5 (F-3?/F-2?)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
L.S.D.	.881	Stealing - Cars	.829	Drag Racing	.791	Moving	.656	Football	.747
Heroin	.819	Homosex Acts	.786	Protesting	.691	Gang Fighting	.618	Cigars	.676
Sniffing	.792	Cheating	.776	Liquor	.639	Motorcycling	.489	Gang Fighting	.434
Mainlining	.783	Stealing	.773	Sex	.354	Abortion	.367	Driving	.425
Marijuana	.773	Fighting (2)	.544	Marriage	.310	Sex	.356	Cigarettes	.349
Pep Pills	.751	Abortion	.499	Driving	.288	Cigars	.265	Fighting (2)	.296
Beer	.453	Heroin	.390			Fighting (2)	-.380	Beer	.274
Sex	.428	Mainlining	.364					Liquor	.262
Motorcycling	.428	Motorcycling	.293					Sex	-.283
Marriage	.420	Drag Racing	.266						
Cigarettes	.401	Cigarettes	.247						
Cheating	.376								
Stealing - Cars	.363								
Liquor	.322								

TABLE 62.

Factors - Good Feeling Inside Gain - Senior High Females - Coronado, 1969

1 (F-4)		2 (F-3?/F-5?)		3 (F-3)		4 (F-1)		5 (F-2)	
Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load	Behavior	Load
Abortion	.793	Gang Fighting	.818	Cheating	.858	Marijuana	.862	Football	.813
Homosex Acts	.791	Stealing - Cars	.751	Stealing	.692	L.S.D.	.740	Protesting	.671
Mainlining	.638	Drag Racing	.610	Marriage	.623	Sniffing	.700	Driving	.585
Heroin	.599	Fighting (2)	.592	Cigars	.502	Pep Pills	.694	Beer	.332
L.S.D.	.494	Pep Pills	.449	Cigarettes	.462	Sex	.681	Liquor	.315
Cigars	.369	Homosex Acts	.440	Liquor	.462	Beer	.569	Fighting (2)	.275
Fighting (2)	.350	Sniffing	.406	Mainlining	.350	Mainlining	.512	Stealing - Cars	-.255
Gang Fighting	.298	Stealing	.341	Beer	.256	Liquor	.452		
Marijuana	.268	Moving	.263	Pep Pills	.256	Protesting	.311		
Cigarettes	.265					Cigarettes	.302		
Driving	-.275					Moving	-.294		

TABLE 63.

Factors - Smoking Actions - Junior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Social	.852	Love	.896	Dropping Out	.963	Adv. Dangers	.863	Psychological	.903
Church	.803	Parents	.727			Law Enforcement	.605	Law Enforcement	.558
Education	.678	Education	.468			Good Example	.392	Parents	.276
Good Example	.562	Good Example	.386			Parents	.356	Good Example	.272
		Adv. Dangers	.294			Social	.272		

TABLE 64.

Factors - Racing Actions - Junior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Church	.842	Education	.840	Love	.879	Dropping Out	.946	Law Enforcement	.845
Social	.688	Good Example	.818	Parents	.745			Adv. Dangers	.721
Adv. Dangers	.382	Psychological	.349	Psychological	.506			Psychological	.641
Education	.364	Church	.312	Social	.461			Social	.397
Parents	.351			Good Example	.364			Church	.287

TABLE 65.

Factors - Sex Actions - Junior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Education	.866	Dropping Out	.931	Love	.901	Psychological	.862	Social	.863
Adv. Dangers	.736	Law Enforcement	.460	Good Example	.374	Law Enforcement	.638	Good Example	.691
Parents	.669	Adv. Dangers	.364	Parents	.341	Church	.447	Church	.456
Church	.582					Parents	.427	Adv. Dangers	.301
Law Enforcement	.451					Adv. Dangers	.285	Education	.259
Good Example	.429					Social	.269	Psychological	.255

TABLE 66.

Factors - Drug Actions - Junior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Adv. Dangers	.855	Dropping Out	.964	Love	.908	Good Example	.865	Psychological	.783
Law Enforcement	.695	Law Enforcement	.337	Parents	.534	Social	.665	Education	.558
Parents	.662			Church	.343	Church	.658	Law Enforcement	.342
Social	.575			Social	.341	Education	.517	Good Example	.311
Church	.555			Psychological	.272	Parents	.373	Adv. Dangers	.288
Education	.448					Law Enforcement	.305		
Psychological	.302					Psychological	.260		

TABLE 67.

Factors - Cheating Actions - Junior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Church	.869	Dropping Out	.947	Psychological	.876	Love	.869	Adv. Dangers	.885
Education	.788	Good Example	-.410	Law Enforcement	.618	Law Enforcement	.587	Education	.295
Parents	.713			Social	.303	Parents	.495	Law Enforcement	.285
Good Example	.710			Good Example	.252	Social	.409		
Social	.678					Adv. Dangers.	.264		
Psychological	.398								
Adv. Dangers	.295								
Love	.255								

TABLE 68.

Factors - Smoking Actions - Junior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Good Example	.847	Dropping Out	.960	Adv. Dangers	.789	Love	.914	Psychological	.856
Law Enforcement	.637	Law Enforcement	.343	Social	.754	Parents	.507	Law Enforcement.	.443
Church	.566			Parents	.751			Church	.378
Education	.538			Education	.684				
Social	.469			Church	.451				

TABLE 69.

Factors - Racing Actions - Junior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Education	.915	Dropping Out	.905	Love	.847	Law Enforcement	.827	Social	.810
Good Example	.648	Psychological	.710	Parents	.699	Adv. Dangers	.681	Church	.653
Church	.368	Law Enforcement	.320	Good Example	.360	Good Example	.338	Adv. Dangers	.615
Social	.312	Parents	.317	Social	.343	Psychological	.325	Good Example	.357
Parents	.260	Adv. Dangers	.256	Church	.323	Parents	.299	Love	.293
Psychological	.254							Psychological	.271

TABLE 70.

Factors - Sex Actions - Junior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Education	.891	Dropping Out	.860	Parents	.478	Social	.838	Law Enforcement	.654
Good Example	.829	Psychological	.731	Church	.259	Church	.808	Parents	.568
Adv. Dangers	.672	Law Enforcement	.452			Law Enforcement	.411	Adv. Dangers	.454
Parents	.484	Adv. Dangers	.258			Good Example	.300	Church	.311
Social	.401					Psychological	.293	Dropping Out	.253
Psychological	.377								
Church	.282								

TABLE 71.

Factors - Drug Actions - Junior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Social	.795	Dropping Out	.930	Love	.951	Adv. Dangers	.788	Psychological	.722
Education	.738	Psychological	.374	Good Example	.287	Law Enforcement	.784	Good Example	.497
Good Example	.697	Church	.286			Parents	.704	Parents	.340
Church	.694					Church	.484	Education	.281
Parents	.379					Psychological	.423	Adv. Dangers	.253
Law Enforcement	.351					Education	.389		
Adv. Dangers	.311					Social	.388		

TABLE 72.

Factors - Cheating Actions - Junior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Education	.881	Dropping Out	.940	Love	.940	Psychological	.798	Parents	.893
Good Example	.828	Law Enforcement	.371	Psychological	.252	Adv. Dangers	.780	Church	.369
Church	.744	Psychological	.271			Law Enforcement	.643	Social	.312
Social	.578					Social	.517		
Adv. Dangers	.372					Good Example	.331		
Parents	.323								

TABLE 73.

Factors - Smoking Actions - Senior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Social	.864	Psychological	.739	Adv. Dangers	.848	Dropping Out	.927	Love	.862
Church	.767	Good Example	.727	Law Enforcement	.785	Good Example	.317	Parents	.657
Education	.612	Education	.358	Church	.393	Psychological	-.323	Good Example	.280
		Parents	.293	Parents	.382	Parents	-.352		
				Education	.329				
				Good Example	.264				

TABLE 74.

Factors - Racing Actions - Senior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Adv. Dangers	.801	Love	.903	Good Example	.803	Education	.887	Dropping Out	.946
Social	.777	Parents	.761	Psychological	.536	Church	.575	Social	.276
Church	.543			Parents	.270	Psychological	.532		
Law Enforcement	.523								
Good Example	.282								

TABLE 75.

Factors - Sex Actions - Senior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Social	.874	Dropping Out	.847	Psychological	.770	Education	.908	Good Example	.791
Church	.852	Law Enforcement	.589	Parents	.686	Law Enforcement	.323	Love	.635
Adv. Dangers	.393	Adv. Dangers	.574	Adv. Dangers	.501	Psychological	.316		
Parents	.381	Love	.516						
Good Example	.359								
Law Enforcement	.281								

TABLE 76.

Factors - Drug Actions - Senior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Adv. Dangers	.773	Dropping Out	.801	Psychological	.864	Love	.826	Church	.910
Law Enforcement	.766	Education	.475	Social	.607	Social	.565	Education	.490
Good Example	.695	Parents	.640	Good Example	.328	Good Example	.450	Law Enforcement	.294
Parents	.460					Parents	.349		
Education	.379					Adv. Dangers	.313		

TABLE 77.

Factors - Cheating Actions - Senior High Males - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Psychological	.889	Love	.880	Social	.834	Law Enforcement	.892	Church	.879
Adv. Dangers	.686	Parents	.844	Dropping Out	.817	Good Example	.475	Adv. Dangers	.408
Education	.683	Good Example	.599	Education	.537	Education	.277		
Good Example	.282	Social	.314	Love	.303				
				Adv. Dangers	.273				

TABLE 78.

Factors - Smoking Actions - Senior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Church	.822	Good Example	.852	Parents	.861	Dropping Out	.879	Psychological.	.879
Social	.819	Education	.281	Law Enforcement	.541	Education	.488	Adv. Dangers	.305
Adv. Dangers	.715	Law Enforcement	-.485	Adv. Dangers	.329	Love	.467	Love	-.420
Education	.422			Education	.328				
Law Enforcement	.339			Love	.306				

TABLE 79.

Factors - Racing Actions - Senior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Law Enforcement	.917	Dropping Out	.941	Church	.860	Love	.967	Psychological	.880
Adv. Dangers	.640	Good Example	-.416	Social	.854			Parents	.552
Education	.615			Education	.490			Good Example	.532
Parents	.330			Good Example	.450			Adv. Dangers	.465
Good Example	.300			Parents	.381			Education	.278

TABLE 80.

Factors - Sex Actions - Senior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Church	.857	Law Enforcement	.901	Love	.949	Psychological	.918	Parents	.864
Social	.806	Good Example	.379	Social	-.265	Education	.388	Good Example	.372
Adv. Dangers	.729	Dropping Out	.343			Dropping Out	.269	Dropping Out	-.522
Education	.684					Good Example	-.276		
Church	.597								
Dropping Out	.549								

TABLE 81.

Factors - Drug Actions - Senior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Social	.921	Psychological	.864	Love	.864	Law Enforcement	.938	Education	.884
Church	.788	Dropping Out	.595	Parents	.789	Dropping Out.	.329	Adv. Dangers	.560
Good Example	.421	Adv. Dangers	.529	Good Example	.643			Dropping Out	.423
Parents	.258			Adv. Dangers	.271			Good Example	.340

TABLE 82.

Factors - Cheating Actions - Senior High Females - Coronado, 1969

1		2		3		4		5	
Action	Load	Action	Load	Action	Load	Action	Load	Action	Load
Church	.788	Law Enforcement	.842	Love	.857	Good Example	.810	Education	.853
Social	.747	Psychological	.637	Dropping Out	.489	Parents	.801	Adv. Dangers	.753
Dropping Out	.521	Adv. Dangers	.393	Education	.266	Church	.342	Social	.263
Psychological	.382	Dropping Out	.386			Social	.341		
Parents	.283					Dropping Out	-.330		

TABLE 83.

Motive Ratings and Other Ratings - College Sample (8)

	MALES					FEMALES			
	Thrill	Friends	Sex Role	Problem Solving	ACHIEVEMENT ~~Action~~	Thrill	Friends	Sex Role	Problem Solving
Risk - Smoking							(-.252)		
Risk - Alcohol							(-.265)		(-.244)
Risk - Sex		.290	.349	-.357					
Risk - Opiates					.322				.318
Risk - Pills				-.298					
Action Gain - Marijuana	.350			-.273					(-.248)
Action Gain - Sex	.329					.315			
Action Gain - Smoking	-.277								
Action Gain - Opiates		-.480			-.335				
Action Gain - Pills		-.295			-.270				
Action Gain - Alcohol									-.354
Thrill Gain - Sex	.342								
Thrill Gain - Opiates		-.344				-.302		-.335	
Thrill Gain - Smoking				-.299					(-.248)
Thrill Gain - Pills					-.284			-.289	
Thrill Gain - Marijuana							(-.251)		
Friends Gain - Smoking	-.385				.273				-.309
Friends Gain - Marijuana		(.255)							
Friends Gain - Alcohol		.328			.274	(.255)			
Friends Gain - Sex				(.255)					
Friends Gain - Pills					.270			(-.261)	
Friends Gain - Opiates								-.282	
Sex Role Gain - Sex	.553								
Sex Role Gain - Smoking	-.539								
Sex Role Gain - Opiates		-.442	-.271					-.303	
Sex Role Gain - Pills					-.295			(-.248)	-.307
Sex Role Gain - Marijuana									-.361
Problem Solving Gain - Opiates		-.384							
Problem Solving Gain - Pills		(-.257)							
Problem Solving Gain - Sex				.377					
Problem Solving Gain - Alcohol								(.253)	

NOTE: ( ) = p > .05 and is not statistically significant.

TABLE 84.

Risk vs. Risk Ratings - College Sample (8)

	MALES									
FEMALES	Marijuana	Cheating	Speeding	Sports	Sex	Theft	Opiates	Alcohol	Smoking	Pills
Marijuana	---	.347	(.174)	(-.082)	.296	(.124)	.336	.303	.269	.339
Cheating	(.142)	---	(.131)	(.201)	(.052)	(.204)	.382	(.186)	(.198)	(.032)
Speeding	.345	(.247)	---	.297	(-.046)	(.234)	.308	(.109)	(.145)	(.103)
Sports	(.176)	(.155)	(.265)	---	(.086)	.351	(.170)	.284	(-.118)	(-.048)
Sex	.448	.412	.509	.354	---	.418	(.151)	.373	(-.094)	.296
Theft	.448	.423	(.162)	(.000)	.332	---	.276	(.146)	(.001)	(.175)
Opiates	.483	(.104)	(.124)	(-.058)	(.081)	.389	---	(.015)	.309	.271
Alcohol	(.187)	(.112)	.346	.309	.369	(-.132)	(.073)	---	(.111)	.275
Smoking	(.100)	(.260)	(.125)	.331	.308	(.073)	(-.211)	.342	---	.390
Pills	.346	(.238)	(.210)	(.053)	.442	.329	(.167)	(.212)	.480	---

NOTE: ( ) = p >.05 and is not statistically significant.

Part IV

Demographic Variables

This section of the report deals with demographic variables such as age, sex, religion, drug use and other behaviors. We are concerned here with such questions as, How often is a particular drug used? Is there a difference between sexes in specific behaviors and do these behaviors increase or decrease in frequency with age? Does religious background influence drug use? How do behaviors relate to each other?

The first three samples were asked for only age and sex information and even this was frequently not given. Sample 4 (CWU students) had previously taken a personal history questionnaire and some demographic information was available for them. All of the remaining 4 samples had demographic questions as a central part of the data.

A. SAMPLE 4 (CWU)

ANALYSIS

Information for this sample included age, religion, grade (year) in college and amount of cigarette and alcohol consumption. A medical history questionnaire provided data on relative frequency of use of legal drugs of a prescription and non-prescription nature and on the degree of use of medical care (health center, doctors, etc.). The items for drug use and medical care were summed to give composite scores for drugs and medical care respectively. The actual frequencies of use were not asked for on drug and medical care and these scores do not lend themselves to interpretation other than more or less use. The data for the other demographic items is similar to that for later samples and it will not be presented in detail here. The present analysis will be limited to correlations between the various demographic measures.

RESULTS

Tables 85 through 87 show the correlations between seven demographic variables which were measured in the CWU sample. The N's (number of scores) for the correlations were variable due to incomplete data and the range of N's is shown in each table. Religion was dichotomised into Catholic = 1, Protestant = 0 so that a positive correlation indicates that Catholics had higher scores than Protestants on a measure.

Age and grade in school were, of course, highly related, but age was generally unrelated to the demographic variables. For reasons which are probably peculiar to this sample Catholic males were younger and used more drugs and medical care while Catholic females tended to smoke more than Protestants.

For the males drinking, drug use and medical care were all positively related, but smoking did not enter into the pattern (see Table 85). The females on the other hand showed significant correlations between smoking and drinking, and smoking and drug use, with

TABLE 85.

Correlations Between Demographic Variables (Males, CWU, 1968)

	***N range	Religion	Grade	Cigarettes	Drinking	Drugs	Medical
Age	58-54	-.340**	.901**	-.007	.133	-.147	.008
Religion	36-34	---	-.381**	.004	-.076	.419**	.442**
Grade	58-54	---	---	-.019	.079	-.146	-.042
Cigarettes	58-54	---	---	---	.024	.380**	.314
Drinking	56-54	---	---	---	---	.306*	,223
Drugs	57-53	---	---	---	---	---	.571**
Medical	57-53	---	---	---	---	---	---

TABLE 86.

Correlations Between Demographic Variables (Females, CWU, 1968)

	***N range	Religion	Grade	Cigarettes	Drinking	Drugs	Medical
Age	64-60	.130	.955**	-.011	.118	.066	.059
Religion	54-51	---	.082	.303*	.207	.002	.179
Grade	64-60	---	---	.025	.036	-.099	.002
Cigarettes	63-60	---	---	---	.346**	.302*	.068
Drinking	64-60	---	---	---	---	.154	.159
Drugs	63-59	---	---	---	---	---	.170
Medical	64-60	---	---	---	---	---	---

TABLE 87.

Correlations Between Demographic Variables (Total, CWU, 1968)

	***N range	Religion	Grade	Cigarettes	Drinking	Drugs	Medical
Age	112-116	---	.924**	.008	.123	-.122	.020
Religion	(not calculated)		---	---	---	---	---
Grade	122-116	---	---	.012	.056	-.132	-.027
Cigarettes	121-116	---	---	---	.184*	.320**	.157
Drinking	122-116	---	---	---	---	.223*	.183*
Drugs	120-114	---	---	---	---	---	.349**
Medical	121-115	---	---	---	---	---	---

* = $p > .05$, ** = $p > .01$

*** This indicates range of the number of response given to the items. Not all subjects answered all items.

very low level and non-significant relationships between drug use, drinking and medical care (see Table 86). The sexes combined (see Table 87) show usually significant but low level positive correlations between smoking, drinking, drug use and medical care. All of these variables have a very restricted range in this sample and the obtained correlations probably underestimate the true relationships.

DISCUSSION

In this college group there is a tendency for those who smoke and drink to use other drugs more often and to avail themselves more often of medical care. As will be seen in the next sections, this tendency to be involved in several rather than single types of behavior is quite general. *For this reason great care should be taken not to isolate a single behavior (e.g., use of marijuana) and try to devise means of changing it alone. Whatever is done on the drug problem must consider the full context of multiple behaviors and the broad cultural supports and values which lead to such behaviors.*

B. DEMOGRAPHIC VARIABLES IN THE CORONADO ADULT (5) AND SCHOOL (6 AND 7) SAMPLES

ANALYSIS

Demographic items were a major part of the data gathered in the Coronado Adult and School samples. Frequency counts were made on all categories and means, standard deviations, correlations and centroid factor analysis calculated by computer. Five factors were derived for each set of variables.

TABLE 88.

Frequency of Drug Use - Coronado Adults - 1969

	Frequency of Use									
	1		2		3		4		5	
Sex	M	F	M	F	M	F	M	F	M	F
Cigarettes	36	14	8	1	0	0	5	2	5	5
Cigars	33	21	15	0	1	0	4	0	2	0
Pipes	40	21	9	0	0	0	0	0	4	0
Beer & Wine	3	6	35	12	10	3	6	0		
Hard Liquor	7	5	21	11	12	3	10	3	3	0
Tranquilizers	44	13	8	8	1	1				
Coffee, Tea & Coke	0	2	8	1	3	3	28	10	16	5
Pep Pills	53	17	0	1						
Aspirin	8	3	40	14	4	4	2	0		
Heroin	52	21	1	0						
Laxatives	40	16	13	4	1	1				
Marijuana	52	21	1	0						
Blood Tonics	52	18	1	2	1	1				
Inhalants	53	21								
LSD	53	21								

1 = Never
2 = Occasionally
3 = Regularly but not daily
4 = Light daily use
5 = Heavy daily use

TABLE 89.

Frequency of Drug Use in Junior and Senior High School Students - Coronado, 1969

	Junior High - Males (n-58)						Junior High - Females (n-54)					
	1	2	3	4	5	%used	1	2	3	4	5	%used
Marijuana	36	9	0	2	3	28%	44	4	1	2	3	19%
LSD	43	1	3	1	2	14%	46	4	2	0	2	15%
Speed	43	3	1	2	1	14%	43	4	2	2	2	19%
Barbiturates	42	0	6	0	2	16%	45	4	1	3	1	15%
Opiates	44	2	0	2	2	12%	51	2	0	0	1	6%
Inhalants	42	3	0	1	4	16%	45	5	2	2	0	17%
Tobacco	22	7	5	7	9	51%	24	8	2	4	15	55%
Alcohol	20	12	9	1	8	60%	22	18	2	5	7	60%
Aspirin	22	5	2	11	9	55%	16	6	7	13	9	60%

	Senior High - Males (n-60)						Senior High - Females (n-53)					
Marijuana	28	7	6	5	10	50%	30	5	5	3	8	41%
LSD	44	5	1	5	1	21%	42	7	1	1	0	20%
Speed	35	8	3	4	6	37%	30	10	4	4	2	40%
Barbiturates	40	7	4	2	3	29%	37	7	2	4	1	38%
Opiates	52	1	0	2	1	7%	45	3	1	1	0	10%
Inhalants	43	7	3	1	2	23%	42	6	2	0	1	20%
Tobacco	9	6	9	10	22	84%	15	14	4	6	11	70%
Alcohol	3	11	8	16	18	95%	6	11	4	12	14	87%
Aspirin	12	3	7	12	22	80%	12	4	2	7	23	75%

11th Grade Senior High School students -- 113
8th Grade Junior High School students -- 112

1 = Never Used

2 = Used 1 - 5 times

3 = Used 6 - 10 times

4 = Used 11 - 35 times

5 = Used Regularly, at least once a week

RESULTS

Frequencies: Tables 88 and 89 show the frequencies which fell in each category of the demographic variables. The considerable range of drug use reported by the school samples contrasts (Table 89) sharply with the virtual lack of such use reported by the adult samples (Table 88). This may represent a real difference in behavior or unwillingness of the adult sample to admit use of drugs. The adult sample is, of course, composed of adults in groups largely known for their opposition to drug use so that the true frequencies among unselected adults is unknown.

Table 89 shows the distribution of actual drug use in the four school sub-groups. As can be seen from this table there is an alarming amount of illegal and dangerous drug use even at the junior high school level. The major non-socially approved drug used is marijuana. However, the really staggering statistics are in the use of socially approved drugs such as tobacco, alcohol and aspirin. Over half of the children have at least tried each of these drugs at the junior high school level and nearly everyone has at least tried them at the senior high school level. It should be noted that aspirin is the only drug that is legal for use at this age under all conditions and medical authorities are pointing out the dangers resulting from the abuse or misuse of this almost universal remedy.

Factors - Adults: Table 90 shows the results of the factor analysis for adults. The male and female adults show quite different

FACTOR
~~for structu~~res. These factors are labeled by the variable with the highest loading on each factor. Only the second factors are significantly correlated (the rank-order correlations between the second factor loadings for the males and females is .56 $p < .05$).

Factor 1 for the males indicates that those with better education and incomes use slightly more tranquilizers and smoke less. Factor 1 for the females indicates that those who drink and smoke most use tranquilizers most and have higher incomes. Factor 2 for the males shows that Catholics and those who attend church more often take more tranquilizers, smoke more and use fewer laxatives. For females factor 2 shows that Catholics and those who attend church more often have higher incomes and better educations. In contrast to the males they smoke less, but they also use fewer laxatives.

The third factor for the males shows that older males drink more. The third factor for the females shows that those who use more aspirin have higher incomes, drink more beer and tend to be Protestants.

Factor 4 indicates that males who use more aspirin also use more laxatives and tranquilizers. The fourth female factor shows that older women tend to smoke less, use fewer aspirins and to be Protestants.

The last factor for the males shows that those who use a lot of coffee also drink more hard liquor, use more aspirin, attend church less often and have lower incomes. Females who drink coffee more often also drink more, smoke more, have higher incomes and attend church more often.

TABLE 90.

Five Factors for Demographic Variables - Coronado Adults, 1969

MALES

Factor 1 (Education)		Factor 2 (Religion)		Factor 3 (Drinking)		Factor 4 (Aspirin)		Factor 5 (Coffee)	
Variable	Load	Variable	Load	Variable	Load	Variable	Load	Variable	Load
Education	.856	Church Attend.	.816	Liquor	.777	Aspirin	.743	Coffee	.880
Income	.775	Religion	.753	Beer	.676	Laxative	.732	Liquor	.294
Tranquilizers	.248	Tranquilizers	.510	Age	.675	Tranquilizers	.313	Aspirin	.283
Smoking	-.780	Smoking	.299					Church Attend.	-.250
		Laxatives	-.353					Income	-.249

Male Adults, n=58; Female Adults, n=22

FEMALES

Factor 1 (Tranquilizers)		Factor 2 (Education)		Factor 3 (Aspirin)		Factor 4 (Age)		Factor 5 (Coffee)	
Variable	Load	Variable	Load	Variable	Load	Variable	Load	Variable	Load
Tranquilizers	.926	Education	.762	Aspirin	.892	Age	.889	Coffee	.862
Liquor	.742	Income	.588	Income	.355	Aspirin	-.249	Beer	.711
Income	.418	Church Attend.	.588	Beer	.341	Religion	-.445	Church Attend.	.536
Smoking	.365	Religion	.459	Religion	-.603	Smoking	-.667	Liquor	.459
Beer	.292	Smoking	-.337					Smoking	.403
		Laxatives	-.684					Income	.375

TABLE 91.

Factors for Drug Use by Junior and Senior High School Students - Coronado, 1969

Factor 1 (Very Dangerous)		Factor 2 (Less Dangerous)		Factor 3 (Aspirin)		Factor 4 (Religion)		Factor 5 (Age)	
Junior High - Males n=58									
Barbiturates	.900	Smoking	.901	Aspirin	.867	Religion	.962	Age	.977
LSD	.898	Alcohol	.754	Inhalants	.599				
Opiates	.841	Marijuana	.340	Amphetamines	.448				
Marijuana	.786	Inhalants	.298	Alcohol	.434				
Amphetamines	.755								
Inhalants	.284								
Alcohol	.257								
Smoking	.249								
Junior High - Females n = 54									
LSD	.859	Smoking	.869	Aspirin	.902	Religion	.973	Age	.988
Opiates	.852	Alcohol	.745	Inhalants	.634				
Amphetamines	.759	Inhalants	.520	Barbiturates	.288				
Marijuana	.742	Amphetamines	.505						
Barbiturates	.715	Marijuana	.486						
Alcohol	.450	Barbiturates	.368						
Smoking	.249								
Senior High - Males n=60									
Opiates	.869	Marijuana	.897	Smoking	.826	Religion	.966	Age	.985
Barbiturates	.759	Amphetamines	.785	Aspirin	.799				
Inhalants	.742	LSD	.512	Alcohol	.763				
LSD	.712	Barbiturates	.437						
Amphetamines	.431	Alcohol	.296						
		Smoking	.266						
Senior High - Females n=53									
LSD	.934	Smoking	.878	Opiates	.909	Religion	.934	Aspirin	.815
Barbiturates	.885	Drinking	.762	Barbiturates	.264	Age	.389	Inhalants	.362
Amphetamines	.802	Marijuana	.480	Aspirin	.263			Age	-.661
Marijuana	.755	Inhalants	.328						
Inhalants	.674	Amphetamines	.284						
Alcohol	.381								

TABLE 92.

Correlaticns Between Frequencies of Drug Use for Coronado School Students

Junior High School Groups - 1969

MALES n = 53

FEMALES n = 54	Marijuana	LSD	Speed	Barbiturates	Heroin	Inhalants	Tobacco	Alcohol	Aspirin
Marijuana	----	.645	.676	.868	.522	.287	.414	.515	.250
LSD	.760	----	.620	.770	.821	.284	.324	.378	.280
Speed	.844	.780	----	.856	.670	.550	.314	.444	.426
Barbiturates	.690	.512	.707	----	.758	.434	.401	.517	.374
Heroin	.433	.660	.471	.609	----	.448	.444	.341	.316
Inhalants	(.251)	(.202)	(.189)	.456	(.155)	----	.401	.426	.335
Tobacco	.549	.420	.592	.452	(.257)	.364	----	.651	(.234)
Alcohol	.664	.557	.708	.618	.370	.508	.672	----	.524
Aspirin	(.015	(-.012)	(-.042)	(.133)	(-.070)	.322	(.007)	(.181)	----

NOTE: ( ) = p >.05 and the correlation is not statistically significant. All Other Correlations: To read Table 92. for the males, start under the drug headings listed across the top of the table and read down to the dashed line on the diagonal, then read across that line to the right margin. For the females start at the drug name on the left margin, read out to the diagonal and down that column.

Senior High School Groups - 1969

MALES n = 58

FEMALES n = 52	Marijuana	LSD	Speed	Barbiturat.	Heroin	Inhalants	Tobacco	Alcohol	Aspirin
Marijuana	----	.620*	.728	.625	.312	.285	.458	.490	.254
LSD	.688	----	.657	.722	.639	.569	.364	.269	(.226)
Speed	.779	.661	----	.739	.375	.507	.371	.353	(.171)
Barbiturates	.688	.868	.680	----	.553	.723	.360	.297	(.244)
Heroin	(.255)	(.221)	(.089)	.385	----	.459	(.147)	(.197)	(.091)
Inhalants	.528	.631	.545	.478	(-.120)	----	.388	.275	(.250)
Tobacco	.498	(.217)	.318	.285	(.029)	.459	----	.608	.559
Alcohol	.631	.398	.509	.444	(.005)	.411	.579	----	.392
Aspirin	(.087)	(.112)	(.076)	(.118)	(.214)	(.215)	(.113)	(.090)	----
~~Religion~~	~~.180~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NOTE: ( ) = p >.05 and the correlation is not statistically significant.

* To convert a correlation to percentages of the behavior that is predictable beyong chance square the figure This correlation (.62) would indicate that there was a 36% predictability beyond chance. Roughly, this means the typical person with an above average use of marijuana will have an 86% (50 + 36) chance of above average use of LSD.

TABLE 93.

Rank Order Correlations Between Factor Loadings for Very Dangerous Drugs Factor in Coronado School Children - 1969

	Jr. M.	Jr. F.	Sr. M.	Sr. F.
Junior High Males	----	.864	.845	.864
Junior High Females	----	----	.664	.790
Senior High Males	----	----	----	.650
Senior High Females	----	----	----	----

TABLE 94.

Rank Order Correlations Between Factor Loadings for Less Dangerous Drugs Factor in Coronado School Children - 1969

Junior High Males	----	.691	.750	.818
Junior High Females	----	----	.555	.818
Senior High Males	----	----	----	.836
Senior High Females	----	----	----	----

TABLE 95.

Rank Order Correlations Between Factor Loadings for the Aspirin Factor in Coronado School Students - 1969

Junior High Males	----	.490	.518	.582
Junior High Females	----	----	.327	.400
Senior High Males	----	----	----	.564
Senior High Females	----	----	----	----

School Children: Table 91 shows the five factor analysis for the junior and senior high males and females. Table 92 shows the correlations from which the factors were derived. As can be seen from these tables the age and religion variables tended to be poorly related to any of the drug uses and formed essentially one-variable factors. Two consistent factors -- one emphasizing very dangerous drugs and one emphasizing less dangerous drugs -- are found in all four groups. Tables 93 and 94 show the rank-order correlations between the factor loadings for these two factors. In general tobacco and alcohol were significantly correlated with the use of the very dangerous drugs such as opiates (see Factor 1, Table 91) but at a somewhat lower level than tobacco and alcohol were correlated to each other (see Factor 2, Table 91).

A less consistent third factor had aspirin as a major variable. The factors with the highest aspirin loading and the rank-order correlations between these loadings are shown in Table 95.

In all of the above comparisons the junior high females have patterns that are somewhat deviant from the other three groups.

DISCUSSION

The results from the adult samples must be considered as suggestive since the samples were non-representative and virtually no use of illegal drugs was reported. There is, however, a general tendency for persons who use one drug to use other drugs more often and this general "drug using" pattern is upheld by the data from the school samples. There appears to be a tendency for women with higher incomes and education to consume more drugs. This pattern is somewhat reversed by the men who tend to smoke less and use fewer drugs if they have better educations and higher incomes. Religion and church attendance seem to be relatively potent variables for the adults, and again the patterns for the men and women seem reversed. Religion was not highly related to drug use in the school samples. The atypical nature of the adult sample may account for the seemingly large role that religion played for adults.

The more interesting results are found for the school samples. Drug use, both legal and illegal, is reported to be quite high especially for marijuana, tobacco, alcohol and aspirin. The drug use falls into consistent and related factors -- one for more dangerous and one for somewhat less dangerous drugs. There is a strong trend toward generalized use of drugs. It is quite clear from the data that the use of alcohol and tobacco is nearly universal on at least a trial basis by the time of eleventh grade. Both of these drugs are dangerous and habit-forming. If one had to look for a "training ground" for general drug use, alcohol and tobacco are the most logical candidates. Since sale of these substances to minors is illegal, it is safe to assume that much of this drug use training takes place in or near the home and serves to condition some students to conduct involving other illegal drugs. The only other dangerous drug that has wide regular use in these samples is marijuana. Drugs such as LSD and opiates are used by a relatively few students, usually on an experimental or irregular basis (these people concurrently tend to also use marijuana and most other drugs). Although aspirin is widely used and has recently been found to have dangerous effects, its use is not highly or consistently related to that of the other drugs.

CONCLUSIONS

What emerges as a first tentative conclusion from the present data is that adult drug users may serve as models at home for teenage drug users. The basic elements in the model are alcohol and tobacco. There is much concern about the use of other "dangerous" drugs by the general adult community while a relatively enormous problem with drinking and smoking goes effectively unnoticed.

Marijuana abuse is substantially indicated in the school samples, but while the more dangerous drugs are also being abused only a small percentage of students are as yet involved. Marijuana is undoubtedly a dangerous substance and the use of it should be discouraged in every reasonable way. However, there is, as yet no solid evidence that marijuana is more dangerous than tobacco or alcohol. If it is true that alcohol and tobacco serve to set the scene for other drug use, then the most efficient way to discourage the use of marijuana would be to stop pushing alcohol and tobacco at home and by every possible advertising technique. Aside from psychological dependence and some perceptual problems for some people, the only greater danger involved with marijuana, as far as we now know, is the social danger due to it illegality. Should we then legalize marijuana and place it in the same class with tobacco and alcohol? There is no answer in the present data except that if we did legalize marijuana we would probably quickly have three universally used dangerous drugs instead of two! The issue will have to be decided by balancing the social cost of the present poor control of marijuana against the cost of its even more widespread use.

A more reasonable approach would be to recognize the areas of greatest abuse (and danger) and to discourage the advertising and use of alcohol and tobacco. A vigorous effort to discover the needs which are being met by drug use, and to find more acceptable and satisfying methods of filling these needs is also imperative. The proposed Coronado education approach (blending cognitive and attitudinal factors) seeking to maximize positive behavior change and minimize the social cost of drug abuse would seem a logical as well as a constructive step.

C. A FURTHER LOOK AT DRUG USE IN THE SCHOOL AND A COMPARISON WITH A COLLEGE SAMPLE (8)

The section above focused on the patterns of correlations in the Coronado School and adult samples. This section of the report will present the cross tabulations between actual frequencies of drug use (e.g., marijuana vs. alcohol use) and compare the earlier data with that in the most recent college sample (8). The college data also contains information about the time of first use of each drug and permits an analysis of how drug use develops. Beahviors such as "sex," "theft" and "cheating" are also included in the college data so that drug use can be placed in a wider context.

TABLE 96.

Correlations Between Frequencies of Drug Use for Total Sex Groups of Coronado School Students - 1969

Males n-111

Female n-106	Marijuana	LSD	Speed	Barbiturates	Heroin	Inhalants	Tobacco	Alcohol	Aspirin
Marijuana	----	.620	.728	.625	.312	.288	.458	.490	.254
LSD	.656	----	.627	.745	.723	.410	.341	.313	.255
Speed	.819	.696	----	.765	.452	.485	.389	.434	.314
Barbiturates	.688	.649	.697	----	.647	.561	.377	.391	.310
Heroin	.308	.481	.294	.492	----	.452	.263	.211	(.182)
Inhalants	.412	.383	.408	.469	(.017)	----	.364	.315	.278
Tobacco	.504	.342	.434	.369	(.156)	.410	----	.681	.451
Alcohol	.665	.441	.612	.524	.198	.434	.592	----	.518
Aspirin	(.106)	(.033)	(.064)	(.141)	(.038)	.265	(.076)	.201	----

NOTE: ( ) p. > .05

TABLE 97.

Correlations Between Frequencies of Drug Use for Total Sample of Coronado School Students - 1969

[redacted] n-217

[redacted]	Marijuana	LSD	Speed	Barbiturates	Heroin	Inhalants	Tobacco	Alcohol	Aspirin
Marijuana	----	.683	.766	.653	.310	.335	.484	.575	.184
LSD	----	----	.648	.703	.649	.406	.344	.366	.161
Speed	----	----	----	.737	.392	.453	.418	.513	.202
Barbiturates	----	----	----	----	.583	.522	.372	.453	.233
Heroin	----	----	----	----	----	.328	.225	.207	(.126)
Inhalants	----	----	----	----	----	----	.383	.361	.266
Tobacco	----	----	----	----	----	----	----	.642	.267
Alcohol	----	----	----	----	----	----	----	----	.364
Aspirin	----	----	----	----	----	----	----	----	----

NOTE: ( ) p > .05

TABLE 98.

Correlations Between Drug Use and Other Behaviors - College Sample (8)

Males n-48

Females n - 51	Marijuana	Cheating	Speeding	Sports	Sex	Theft	Heroin	Alcohol	Smoking	Pills
Marijuana	----	(.017)	(-.036)	(-.028)	.538	.380	.322	.439	.619	.635
Cheating	(.106)	----	(.167)	-.347	(-.030)	.313	.379	(.043)	(-.088)	(.152)
Speeding	(.079)	(.105)	----	(.114)	(.062)	(.052)	(.172)	(-.040)	(.140)	(.142)
Sports	(-.211)	(-.014)	-.260	----	(.173)	(-.083)	-.322	(.157)	(-.103)	(-.045)
Sex	.467	(.117)	(.089)	(.108)	----	(.176)	.308	.306	.296	.409
Theft	.411	.280	(.026)	(-.187)	.306	----	.516	.349	.300	.348
Heroin	----	----	----	----	----	----	----	(.147)	.378	.398
Alcohol	.251	(-.201)	(.114)	(.092)	.256	(-.227)	----	----	.309	.481
Smoking	.480	(.115)	(.136)	(-.091)	(.218)	(.058)	----	.400	----	.548
Pills	.553	(.025)	(.041)	(.142)	.298	(-.125)	----	.375	.314	----

NOTE: ( ) = p > .05 (not statistically significant)

TABLE 99.

Patterns of Drug Use in Junior High Males - Coronado, 1969

MALES

LSD

MARIJUANA **	A	B	C	1	2
A	36	1	1	38	71.70%
B	7	2	0	9	16.98%
C	2	1	3	6	11.32%
3	45	4	4	53	
4	84.91%	7.55%	7.54%		

SPEED

MARIJUANA	A	B	C	1	2
A	37	0	1	38	71.70%
B	8	0	1	9	16.98%
C	0	4	2	6	11.32%
3	45	4	4	53	
4	84.91%	7.55%	7.54%		

BARBITURATES

MARIJUANA	A	B	C	1	2
A	37	1	0	38	71.70%
B	7	2	0	9	16.98%
C	0	3	3	6	11.32%
3	44	6	3	53	
4	83.02%	11.32%	5.66%		

OPIATES

MARIJUANA	A	B	C	1	2
A	36	0	2	38	71.70%
B	7	2	0	9	16.98%
C	3	1	2	6	11.32%
3	46	3	4	53	
4	86.76%	5.66%	7.55%		

INHALANTS

MARIJUANA	A	B	C	1	2
A	33	2	3	38	71.70%
B	7	1	1	9	16.98%
C	4	0	2	6	11.32%
3	44	3	6	53	
4	83.02%	5.66%	11.32%		

TOBACCO

MARIJUANA	A	B	C	1	2
A	19	10	9	38	71.70%
B	3	2	4	9	16.98%
C	1	1	4	6	11.32%
3	23	13	17	53	
4	43.40%	24.52%	32.08%		

DRINKING

MARIJUANA	A	B	C	1	2
A	20	13	5	38	71.70%
B	1	7	1	9	16.98%
C	0	2	4	6	11.32%
3	21	22	10	53	
4	39.62%	41.51%	8.87%		

ASPIRIN

MARIJUANA	A	B	C	1	2
A	16	6	15	37	71.15%
B	6	0	3	9	17.31%
C	1	1	4	6	11.54%
3	23	7	22	52	
4	44.23%	13.47%	42.31%		

LSD

TOBACCO	A	B	C	1	2
A	21	2	0	23	43.40%
B	11	2	0	13	24.52%
C	13	0	4	17	32.08%
3	45	4	4	53	
4	84.91%	7.55%	7.54%		

SPEED

TOBACCO	A	B	C	1	2
A	21	1	1	23	43.40%
B	12	1	0	13	24.52%
C	12	2	3	17	32.08%
3	45	4	4	53	
4	84.91%	7.55%	7.54%		

**

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 99. Continued

BARBITURATES

		A	B	C	1	2
TOBACCO	A	21	2	0	23	43.40%
	B	11	2	0	13	24.52%
	C	12	2	3	17	32.08%
	3	44	6	3	53	
	4	83.02%	11.32%	5.66%		

INHALANTS

		A	B	C	1	2
TOBACCO	A	21	1	1	23	43.40%
	B	11	2	0	13	24.52%
	C	12	0	5	17	32.08%
	3	44	3	6	53	
	4	83.02%	5.66%	11.32%		

ASPIRIN

		A	B	C	1	2
TOBACCO	A	12	2	9	23	43.40%
	B	7	2	4	13	24.52%
	C	4	3	9	17	32.08%
	3	23	7	22	53	
	4	44.23%	13.47%	42.31%		

LSD

		A	B	C	1	2
ALCOHOL	A	19	1	1	21	39.62%
	B	20	2	0	22	41.54%
	C	6	1	3	10	8.87%
	3	45	4	4	53	
	4	84.91%	7.55%	7.54%		

BARBITURATES

		A	B	C	1	2
ALCOHOL	A	21	0	0	21	39.62%
	B	17	5	0	22	41.54%
	C	6	1	3	10	8.87%
	3	44	6	3	53	
	4	83.02%	11.32%	5.66%		

INHALANTS

		A	B	C	1	2
ALCOHOL	A	20	0	1	21	39.62%
	B	19	2	1	22	41.54%
	C	5	1	4	10	8.87%
	3	44	3	6	53	
	4	83.02%	5.66%	11.32%		

OPIATES

		A	B	C	1	2
TOBACCO	A	22	1	0	23	43.40%
	B	12	1	0	13	24.52%
	C	12	1	4	17	32.08%
	3	46	3	4	53	
	4	86.79%	5.66%	7.54%		

ALCOHOL

		A	B	C	1	2
TOBACCO	A	17	6	0	23	43.40%
	B	2	6	1	13	24.52%
	C	2	7	2	17	32.08%
	3	21	22	10	53	
	4	39.62%	41.51%	8.87%		

SPEED

		A	B	C	1	2
ALCOHOL	A	21	0	0	21	39.62%
	B	18	2	2	22	41.54%
	C	6	2	2	10	8.87%
	3	45	4	4	53	
	4	84.91%	7.55%	7.54%		

OPIATES

		A	B	C	1	2
ALCOHOL	A	20	0	1	21	39.62%
	B	19	2	1	22	41.54%
	C	7	1	2	10	8.87%
	3	46	3	4	53	
	4	86.79%	5.66%	7.54%		

ASPIRIN

		A	B	C	1	2
ALCOHOL	A	14	2	5	21	40.38%
	B	8	4	10	22	42.31%
	C	1	1	7	9	17.30%
	3	23	7	22	52	
	4	44.23%	13.77%	42.31%		

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 100.

Patterns of Drug Use in Junior High Females - Coronado, 1969

FEMALES

LSD

MARIJUANA	A	B	C	1	2
A	41	3	0	44	81.48%
B	4	1	0	5	9.26%
C	1	2	2	5	9.26%
3	46	6	2	54	
4	85.19%	11.11%	3.70%		

BARBITURATES

MARIJUANA	A	B	C	1	2
A	42	2	0	44	81.48%
B	2	1	2	5	9.26%
C	1	2	2	5	9.26%
3	45	5	4	54	
4	83.33%	9.46%	7.41%		

INHALANTS

MARIJUANA	A	B	C	1	2
A	40	4	0	44	81.48%
B	2	2	1	5	9.26%
C	3	1	1	5	9.26%
3	45	7	2	54	
4	83.33%	12.96%	3.70%		

ALCOHOL

MARIJUANA	A	B	C	1	2
A	21	19	4	44	81.48%
B	1	1	3	5	9.26%
C	0	0	5	5	9.26%
3	22	20	12	54	
4	40.74%	37.03%	22.22%		

LSD

TOBACCO	A	B	C	1	2
A	23	1	0	24	45.28%
B	10	0	0	10	18.86%
C	12	5	2	19	35.85%
3	45	6	2	53	
4	85.19%	11.11%	3.70%		

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

SPEED

MARIJUANA	A	B	C	1	2
A	42	2	0	44	83.02%
B	1	2	1	4	7.55%
C	0	2	3	5	9.34%
3	43	6	4	53	
4	81.13%	11.32%	7.54%		

OPIATES

MARIJUANA	A	B	C	1	2
A	43	1	0	44	81.48%
B	4	1	0	5	9.26%
C	4	0	1	5	9.26%
3	51	2	1	54	
4	94.44%	3.70%	1.85%		

TOBACCO

MARIJUANA	A	B	C	1	2
A	24	10	9	43	81.13%
B	0	0	5	5	9.44%
C	0	0	5	5	9.44%
3	24	10	19	53	
4	45.28%	18.86%	35.85%		

ASPIRIN

MARIJUANA	A	B	C	1	2
A	13	11	17	41	80.38%
B	1	2	2	5	9.80%
C	2	0	3	5	9.80%
3	16	13	22	51	
4	31.37%	25.49%	43.14%		

SPEED

TOBACCO	A	B	C	1	2
A	24	0	0	24	46.15%
B	10	0	0	10	19.23%
C	8	6	4	18	34.61%
3	42	6	4	52	
4	80.77%	11.54%	7.70%		

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 100. Continued

BARBITURATES

TOBACCO	A	B	C	1	2
A	24	0	0	24	45.28%
B	8	2	0	10	18.86%
C	12	3	4	19	35.85%
3	44	5	4	53	
4	83.02%	9.44%	7.55%		

INHALANTS

TOBACCO	A	B	C	1	2
A	24	0	0	24	45.28%
B	8	2	0	10	18.86%
C	13	4	2	19	35.85%
3	45	6	2	53	
4	84.91%	11.32%	3.77%		

ASPIRIN

TOBACCO	A	B	C	1	2
A	8	5	10	23	46.00%
B	2	4	3	9	18.00%
C	6	3	9	18	36.00%
3	16	12	22	50	
4	32.00%	24.00%	44.00%		

SPEED

ALCOHOL	A	B	C	1	2
A	21	1	0	22	41.50%
B	19	1	0	20	37.73%
C	3	4	4	11	20.75%
3	43	6	4	53	
4	81.13%	11.32	7.54%		

OPIATES

ALCOHOL	A	B	C	1	2
A	22	0	0	22	40.74%
B	10	0	0	20	37.03%
C	9	2	1	12	22.22%
3	51	2	1	54	
4	94.44%	3.70%	1.85%		

ASPIRIN

ALCOHOL	A	B	C	1	2
A	7	6	7	20	39.22%
B	6	6	8	20	39.21%
C	3	1	7	11	21.57%
3	16	13	22	51	
4	31.37%	25.49%	43.14%		

OPIATES

TOBACCO	A	B	C	1	2
A	24	0	0	24	45,28%
B	10	0	0	10	18,86%
C	16	2	1	19	35.85%
3	50	2	1	53	
4	94,34%	3,77%	1,89%		

ALCOHOL

TOBACCO	A	B	C	1	2
A	18	6	0	24	45.28%
B	2	8	0	10	18.86%
C	2	6	11	19	35.85%
3	22	20	11	53	
4	41,51%	37.73%	20.75%		

LSD

ALCOHOL	A	B	C	1	2
A	22	0	0	22	40.74%
B	18	2	0	20	37.03%
C	6	4	2	12	22.22%
3	46	6	2	54	
4	85.19%	11.11%	3.70%		

BARBITURATES

ALCOHOL	A	B	C	1	2
A	21	1	0	22	40.74%
B	19	1	0	20	37.03%
C	5	3	4	12	22.22%
3	45	5	4	54	
4	83.33%	9.46%	7.41%		

INHALANTS

ALCOHOL	A	B	C	1	2
A	21	1	0	22	40.74%
B	17	3	0	20	37.03%
C	7	3	2	12	22.22%
3	45	7	2	54	
4	83.33%	12.96%	3.70%		

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 101.

Patterns of Drug Use in Senior High Males - Coronado, 1969

MALES

LSD

MARIJUANA	A	B	C	1	2
A	27	1	0	28	48.28%
B	12	1	0	13	22.41%
C	7	6	6	17	29.41%
3	44	8	6	58	
4	75.86%	13.79%	10.34%		

BARBITURATES

MARIJUANA	A	B	C	1	2
A	26	1	1	28	48.28%
B	11	2	0	13	22.41%
C	4	9	4	17	29.41%
3	41	12	5	58	
4	70.69%	20.69%	8.62%		

INHALANTS

MARIJUANA	A	B	C	1	2
A	25	2	1	28	48.28%
B	10	3	0	13	22.41%
C	9	6	2	17	29.41%
3	44	11	3	58	
4	75.86%	18.97%	5.17%		

ALCOHOL

MARIJUANA	A	B	C	1	2
A	3	12	13	28	48.28%
B	0	5	8	13	22.41%
C	0	2	15	17	29.41%
3	3	19	36	58	
4	5.17%	32.76%	62.07%		

LSD

TOBACCO	A	B	C	1	2
A	9	0	0	9	15.52%
B	13	2	0	15	25.86%
C	22	6	6	34	58.62%
3	44	8	6	58	
4	75.86%	13.79%	10.34%		

SPEED

MARIJUANA	A	B	C	1	2
A	25	2	1	28	48.28%
B	9	4	0	13	22.41%
C	1	6	10	17	29.41%
3	35	12	11	58	
4	60.34%	20.69%	18.96%		

OPIATES

MARIJUANA	A	B	C	1	2
A	27	0	1	28	48.28%
B	13	0	0	13	22.41%
C	14	1	2	17	29.41%
3	54	1	3	58	
4	93.10%	1.72%	5.17%		

TOBACCO

MARIJUANA	A	B	C	1	2
A	7	9	12	28	48.28%
B	2	3	8	13	22.41%
C	0	3	14	17	29.41%
3	9	15	34	58	
4	15.52%	25.86%	58.62%		

ASPIRIN

MARIJUANA	A	B	C	1	2
A	6	5	17	28	48.28%
B	5	2	7	13	22.41%
C	1	3	13	17	29.41%
3	12	10	36	58	
4	20.69%	17.24%	62.07%		

SPEED

TOBACCO	A	B	C	1	2
A	8	1	0	9	15.52%
B	11	2	2	15	25.86%
C	16	9	9	34	58.62%
3	35	12	11	58	
4	60.34%	20.69%	18.96%		

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 101. Continued

BARBITURATES

		A	B	C	1	2
TOBACCO	A	9	0	0	9	15.52%
	B	13	1	1	15	25.86%
	C	19	11	4	34	58.62%
	3	41	12	5	58	
	4	70.69%	20.69%	8.62%		

INHALANTS

		A	B	C	1	2
TOBACCO	A	9	0	0	9	15.52%
	B	13	2	0	15	25.86%
	C	22	9	3	34	58.62%
	3	44	11	3	58	
	4	75.86%	18.97%	5.17%		

ASPIRIN

		A	B	C	1	2
TOBACCO	A	6	1	2	9	15.52%
	B	4	6	5	15	25.86%
	C	2	3	29	34	58.62%
	3	12	10	36	58	
	4	20.69%	17.24%	62.07%		

SPEED

		A	B	C	1	2
ALCOHOL	A	3	0	0	3	5.17%
	B	15	3	1	19	32.76%
	C	17	9	10	36	62.07%
	3	35	12	11	58	
	4	60.34%	20.69%	18.96%		

OPIATES

		A	B	C	1	2
ALCOHOL	A	3	0	0	3	5.17%
	B	19	0	0	19	32.76%
	C	32	1	3	36	62.07%
	3	54	1	3	58	
	4	93.10%	1.72%	5.17%		

ASPIRIN

		A	B	C	1	2
ALCOHOL	A	2	0	1	3	5.17%
	B	5	4	10	19	32.76%
	C	5	6	25	36	62.07%
	3	12	10	36	58	
	4	20.69%	17.25%	62.07%		

OPIATES

		A	B	C	1	2
TOBACCO	A	9	0	0	9	15.52%
	B	14	0	1	15	25.86%
	C	31	1	2	34	58.62%
	3	54	1	3	58	
	4	93.10%	1.72%	5.17%		

ALCOHOL

		A	B	C	1	2
TOBACCO	A	3	5	1	9	15.52%
	B	0	5	10	15	25.86%
	C	0	9	25	34	58.62%
	3	3	19	36	58	
	4	5.17%	32.76%	62.07%		

LSD

		A	B	C	1	2
ALCOHOL	A	3	0	0	3	5.17%
	B	17	1	1	19	32.76%
	C	24	7	5	36	62.07%
	3	44	8	6	58	
	4	75.86%	13.79%	10.34%		

BARBITURATES

		A	B	C	1	2
ALCOHOL	A	3	0	0	3	5.17%
	B	16	3	0	19	32.76%
	C	22	9	5	36	62.07%
	3	41	12	5	58	
	4	70.69%	20.69%	8.62%		

INHALANTS

		A	B	C	1	2
ALCOHOL	A	3	0	0	3	5.17%
	B	15	4	0	19	32.76%
	C	26	7	3	36	62.07%
	3	44	11	3	58	
	4	75.86%	18.97%	5.17%		

A = Never Used
B = Infrequently Used (1 -10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 102.

Patterns of Drug Use in Senior High Females - Coronado, 1969

FEMALES

LSD

MARIJUANA	A	B	C	1	2
A	30	0	0	30	57.69%
B	8	2	0	10	19.24%
C	4	7	1	12	23.08%
3	42	9	1	52	
4	80.77%	17.31%	1.92%		

BARBITURATES

MARIJUANA	A	B	C	1	2
A	28	2	0	30	57.69%
B	5	4	1	10	19.24%
C	4	3	5	12	23.08%
3	37	9	6	52	
4	71.15%	17.31%	11.54%		

INHALANTS

MARIJUANA	A	B	C	1	2
A	28	3	0	30	57.69%
B	9	1	0	10	19.24%
C	5	5	2	12	23.08%
3	42	8	2	52	
4	80.77%	15.39%	3.84%		

ALCOHOL

MARIJUANA	A	B	C	1	2
A	6	16	8	30	57.69%
B	0	2	8	10	19.24%
C	0	1	11	12	23.08%
3	6	19	27	52	
4	11.54%	36.53%	52.93%		

LSD

TOBACCO	A	B	C	1	2
A	12	3	0	15	29.41%
B	17	1	0	18	35.29%
C	12	5	1	18	35.29%
3	41	9	1	51	
4	80.39%	17.65%	1.96%		

SPEED

MARIJUANA	A	B	C	1	2
A	26	3	1	30	58.82%
B	4	6	0	10	19.70%
C	0	5	6	11	21.57%
3	30	14	7	51	
4	58.82%	27.45%	13.72%		

OPIATES

MARIJUANA	A	B	C	1	2
A	29	1	0	30	58.82%
B	7	2	0	9	17.64%
C	10	1	1	12	23.53%
3	46	4	1	51	
4	90.20%	7.84%	1.96%		

TOBACCO

MARIJUANA	A	B	C	1	2
A	11	15	4	30	58.82%
B	1	3	6	10	19.70%
C	3	0	8	11	21.57%
3	15	18	18	51	
4	29.41%	35.29%	35.29%		

ASPIRIN

MARIJUANA	A	B	C	1	2
A	9	2	17	28	57.14%
B	0	2	8	10	20.40%
C	3	2	6	11	22.45%
3	12	6	31	49	
4	24.49%	12.24%	63.27%		

SPEED

TOBACCO	A	B	C	1	2
A	11	2	2	15	30.00%
B	15	2	1	18	36.00%
C	4	10	3	17	34.00%
3	30	14	6	50	
4	60.00%	28.00%	14.00%		

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 102. Continued

OPIATES

TOBACCO	A	B	C	1	2
A	14	1	0	15	30.00%
B	15	2	0	17	34.00%
C	16	1	1	18	36.00%
3	45	4	1	50	
4	90.00%	8.00%	2.00%		

ALCOHOL

TOBACCO	A	B	C	1	2
A	5	6	4	15	29.41%
B	1	11	6	18	35.29%
C	0	2	16	18	35.29%
3	6	19	26	51	
4	11.76%	37.26%	50.98%		

LSD

ALCOHOL	A	B	C	1	2
A	6	0	0	6	11.54%
B	18	1	0	19	36.53%
C	18	8	1	27	52.93%
3	42	9	1	52	
4	80.77%	17.31%	1.92%		

SPEED

ALCOHOL	A	B	C	1	2
A	6	0	0	6	11.76%
B	14	5	0	19	37.26%
C	10	9	7	26	50.98%
3	30	14	7	51	
4	58.82%	27.45%	13.72%		

OPIATES

ALCOHOL	A	B	C	1	2
A	6	0	0	6	11.76%
B	17	2	0	19	37.26%
C	23	2	1	26	50.98%
3	46	4	1	51	
4	90.20%	7.84%	1.96%		

ASPIRIN

ALCOHOL	A	B	C	1	2
A	1	0	5	6	12.24%
B	6	2	9	17	34.70%
C	5	4	17	26	53.60%
3	12	6	31	49	
4	24.49%	12.24%	63.27%		

BARBITURATES

TOBACCO	A	B	C	1	2
A	12	2	1	15	29.41%
B	16	1	1	18	35.29%
C	8	6	4	18	35.29%
3	36	9	6	51	
4	70.59%	17.65%	11.76%		

INHALANTS

TOBACCO	A	B	C	1	2
A	14	1	0	15	29.41%
B	17	1	0	18	35.29%
C	11	5	2	18	35.29%
3	42	7	2	51	
4	82.35%	13.72%	3.92%		

ASPIRIN

TOBACCO	A	B	C	1	2
A	4	2	9	15	31.25%
B	5	1	10	16	33.33%
C	3	3	11	17	35.42%
3	12	6	30	48	
4	25.00%	13.50%	62.50%		

BARBITURATES

ALCOHOL	A	B	C	1	2
A	6	0	0	6	11.54%
B	17	2	0	19	36.53%
C	14	7	6	27	52.93%
3	37	9	6	52	
4	71.15%	17.31%	11.54%		

INHALANTS

ALCOHOL	A	B	C	1	2
A	6	0	0	6	11.54%
B	18	1	0	19	36.53%
C	18	7	2	27	52.93%
3	42	8	2	52	
4	80.77%	15.39%	3.84%		

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

C

TABLE 103.

Patterns of Drug Use and Sexual Behavior in College Males - Spring, 1969

		PILLS				
		A	B	C	1	2
SMOKING	A	20	9	1	30	62.50%
	B	2	2	3	7	14.58%
	C	1	7	3	11	22.92%
	3	23	18	7	48	
	4	47.92%	37.50%	14.58%		

Only 3 pill users have not smoked.

		SMOKING				
		A	B	C	1	2
DRINKING	A	2	1	0	3	6.25%
	B	15	2	4	21	43.75%
	C	13	4	7	24	50.00%
	3	30	7	11	48	
	4	62.50%	14.58%	22.92%		

Only 1 smoker does not drink -- only 2 people have not tried at least one.

		PILLS				
		A	B	C	1	2
SEX	A	13	3	1	17	35.42%
	B	6	8	4	18	37.50%
	C	4	7	2	13	27.08%
	3	23	18	7	48	
	4	47.92%	37.50%	14.58%		

All 5 heroin users drink at least infrequently.
(1 heavily)
All heroin users smoke regularly.
All heroin users have tried pills, 2 infrequently and one regularly.

		PILLS				
		A	B	C	1	2
DRINKING	A	3	0	0	3	6.25%
	B	12	8	1	21	43.75%
	C	8	10	6	24	50.00%
	3	23	18	7	48	
	4	47.92%	37.50%	14.58%		

All pill users have used alcohol.

		HEROIN				
		A	B	C	1	2
MARIJUANA	A	18	0	0	18	37.50%
	B	15	0	0	15	31.25%
	C	12	2	1	15	31.25%
	3	45	2	1	48	
	4	93.75%	4.17%	2.08%		

		DRINKING				
		A	B	C	1	2
MARIJUANA	A	3	9	6	18	37.50%
	B	0	7	8	15	31.25%
	C	0	5	10	15	31.25%
	3	3	21	24	48	
	4	6.25%	43.75%	50.00%		

Every Marijuana user drinks at least infrequently.

		SMOKING				
		A	B	C	1	2
MARIJUANA	A	17	1	0	18	37.50%
	B	11	0	4	15	31.25%
	C	2	6	7	15	31.25%
	3	30	7	11	48	
	4	62.50%	14.58%	22.92%		

		PILLS				
		A	B	C	1	2
MARIJUANA	A	15	2	1	18	37.50%
	B	5	9	1	15	31.25%
	C	3	7	5	15	31.25%
	3	23	18	7	48	
	4	47.92%	37.50%	14.58%		

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 103. Continued

SEX

MARIJUANA	A	B	C	1	2
A	15	1	2	18	37.50%
B	0	10	5	15	31.25%
C	2	7	6	15	31.25%
3	17	18	13	48	
4	35.42%	37.50%	27.08%		

HEROIN

SEX	A	B	C	1	2
A	17	0	0	17	35.42%
B	18	0	0	18	37.50%
C	10	2	1	13	27.08%
3	45	2	1	48	
4	93.75%	4.17%	2.08%		

DRINKING

SEX	A	B	C	1	2
A	3	9	5	17	35.42%
B	0	5	13	18	37.50%
C	0	7	6	13	27.08%
3	3	21	24	48	
4	6.25%	43.75%	50.00%		

All men with sex experience have at least tried alcohol.

SMOKING

SEX	A	B	C	1	2
A	14	2	1	17	35.42%
B	8	5	5	18	37.50%
C	8	0	5	13	27.08%
3	30	7	11	48	
4	62.50%	14.58%	22.92%		

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 104.

Patterns of Drug Use and Sexual Behavior in College Females - Spring, 1969

SEX

MARIJUANA	A	B	C	1	2
A	19	4	4	27	55.10%
B	5	4	4	13	26.53%
C	3	1	5	9	18.36%
3	27	9	13	49	
4	55.10%	18.36%	26.53%		

SMOKING

MARIJUANA	A	B	C	1	2
A	25	0	3	28	54.90%
B	7	3	4	14	28.45%
C	3	2	4	9	17.64%
3	35	5	11	51	
4	68.63%	9.80%	21.57%		

DRINKING

SEX	A	B	C	1	2
A	9	13	5	27	55.10%
B	1	3	5	9	18.36%
C	4	2	7	13	26.53%
3	14	18	17	49	
4	28.57%	36.73%	34.69%		

PILLS

SEX	A	B	C	1	2
A	22	5	0	27	55.10%
B	6	3	0	9	18.36%
C	8	5	0	13	26.53%
3	36	13	0	49	
4	73.47%	27.53%			

PILLS

DRINKING	A	B	C	1	2
A	13	1	0	14	27.45%
B	17	3	0	20	39.21%
C	8	9	0	17	33.33%
3	38	13	0	51	
4	74.51%	25.59%			

Only 1 pill user have never used alcohol.

NOTE: Use of other drugs and frequency of other behaviors are not shown in Tables 103. and 104. since the pattern of correlations between these other behaviors is either near zero or similar to the ones illustrated inTable 98.

DRINKING

MARIJUANA	A	B	C	1	2
A	11	12	6	28	54.90%
B	1	5	8	14	28.45%
C	2	3	4	9	17.64%
3	14	20	17	51	
4	27.45%	39.21%	33.33%		

Only 3 pot users have never used alcohol.

PILLS

MARIJUANA	A	B	C	1	2
A	25	3	0	28	54.90%
B	10	4	0	14	28.45%
C	3	6	0	9	17.64%
3	38	13	0	51	
4	74.51%	25.59%			

SMOKING

SEX	A	B	C	1	2
A	22	1	4	27	55.10%
B	5	1	3	9	18.36%
C	7	2	5	13	26.53%
3	34	4	11	49	
4	69.39%	8.16%	22.45%		

SMOKING

DRINKING	A	B	C	1	2
A	13	0	1	14	27.45%
B	15	2	3	20	39.21%
C	7	3	7	17	33.33%
3	35	5	11	51	
4	68.63%	9.80%	21.57%		

Only 1 nondrinker smokes -- all other smokers are drinkers.

PILLS

SMOKING	A	B	C	1	2
A	30	5	0	35	68.63%
B	2	3	0	5	9.80%
C	6	5	0	11	21.57%
3	38	13	0	51	
4	74.51%	25.59%			

A = Never Used
B = Infrequently Used (1 - 10 times)
C = Regular Use (11 + times)

1 = Frequency in Column
2 = Percentage in Column
3 = Frequency in Row
4 = Percentage in Row

TABLE 105.

Distribution of Behaviors in the College Sample - Spring, 1969

	FREQUENCY OF USE				
MALES	Never	Once or Twice	Infrequently	Somewhat Regularly	Regularly
Marijuana	18 (37.50%)	6 (12.50%)	9 (18.75%)	6 (12.50%)	9 (18.75%)
Cheating	8 (16.67%)	17 (35.42%)	20 (41.67%)	2 (4.17%)	1 (2.08%)
Speeding	none	5 (10.42%)	18 (37.50%)	12 (25.00%)	13 (27.08%)
Sports	2 (4.17%)	5 (10.42%)	20 (41.67%)	12 (25.00%)	9 (18.75%)
Sex	17 (35.42%)	6 (12.50%)	12 (25.00%)	4 (8.33%)	9 (18.75%)
Theft (Major)	36 (75.00%)	8 (16.67%)	2 (4.17%)	none	2 (4.17%)
Opiates	45 (93.75%)	2 (4.17%)	none	none	1 (2.08%)
Alcohol (until felt)	3 (6.25%)	5 (10.42%)	16 (33.33%)	12 (25.00%)	12 (25.00%)
Smoking (1/2 pack of more)	30 (62.50%)	3 (6.25%)	4 (8.33%)	2 (4.17%)	9 (18.75%)
Pills	23 (47.92%)	11 (22.92%)	7 (14.58%)	6 (12.50%)	1 (2.08%)
FEMALES					
Marijuana	28 (54.90%)	10 (19.61%)	4 (7.84%)	3 (5.88%)	6 (11.76%)
Cheating	8 (15.69%)	22 (43.14%)	18 (35.29%)	3 (5.88%)	none
Speeding	1 (1.96%)	19 (37.25%)	18 (35.29%)	11 (21.57%)	2 (3.92%)
Sports	12 (24.00%)	18 (36.00%)	18 (36.00%)	1 (2.00%)	1 (2.00%)
Sex	27 (55.10%)	3 (6.12%)	6 (12.24%)	5 (10.20%)	8 (16.33%)
Theft (Major)	47 (94.00%)	2 (4.00%)	1 (2.00%)	none	none
Opiates	51(100.00%)	none	none	none	none
Alcohol	14 (27.45%)	4 (7.84%)	16 (31.37%)	11 (21.57%)	6 (11.76%)
Smoking (1/2 pack or more)	35 (68.63%)	4 (7.84%)	1 (1.96%)	3 (5.88%)	8 (15.69%)
Pills	38 (74.51%)	6 (11.76%)	7 (13.73%)	none	none

ANALYSIS

Frequencies of drug use were cross tabulated in the school and college samples. Correlations were also calculated between the demographic variables in the college sample, but factor analysis has not yet been carried out. Corrections were also calculated for the combined schools groups (See tables 96 and 97).

RESULTS

Relationships Between Demographic Variables - Drug Use: Tables 96 through 105 detail the drug use patterns and only highlights will be discussed here. In every sample there was a strong tendency for regular or heavy users of any drug to also be regular or heavy users of one or more other drugs. This was particularly true in the case of alcohol. Alcohol users tended to use other drugs more often and alcohol was by far the most used dangerous drug.

In general alcohol, tobacco and marijuana were the most widely used of the dangerous drugs. Regular use[2] of various pills such as barbiturates and amphetamines never exceeded 15% of the samples and heavy use was much less. Opiates and other hard narcotics were rarely used at all. Those who did use pills (amphetamines, barbiturates, LSD, etc.) and hard drugs heavily also used most other drugs regularly so that the use of the more frightening drugs is best seen as an aspect of a general tendency toward abuse of drugs.

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[2] See Table 89. "Regular Use" is defined here as using 11 times or more.

Use of marijuana on a regular basis ranged from 9.26% (females) and 11.32% (males) in junior high students through 23.08% (females) and 31.25% (males) in the college students. By the end of high school over 1/2 of all students have at least tried marijuana. Nearly 2/3 have done so in college.

By way of comparison about 60% of the junior high students (eighth grade) have at least tried alcohol. This figure rises to over 90% by the eleventh grade in high school and remains about the same in the college group.

Data from the college group indicates that alcohol was the first dangerous drug used by most students, closely followed by tobacco. Marijuana typically was the next dangerous drug used. Alcohol use started as early as eleven years while the youngest person in the college sample to try marijuana was sixteen. In all of the samples only two regular users of marijuana do not use alcohol to some degree (they were college females) and only seven do not smoke cigarettes to some degree. Only two college males who use marijuana regularly do not smoke tobacco; all other regular male users of marijuana both smoke and drink to some degree.

The pattern of drug use is quite clear in this data. Alcohol and tobacco are the prototypes of drug behavior in youth. Use of these drugs may be strongly predictive of all other drug use. This is not to say that the use of alcohol "causes" the use of other drugs. As will be discussed in the next section, drug use is part of a wider pattern of behavior and is a symptom of individual (and sometimes collective) value and personality characteristics rather than a cause of "deviant" social behavior (see also page 220).

Drug abuse and Other "Undesirable" Behavior: In the college sample the subjects were asked about the frequency of such behaviors as sex, cheating and stealing. They were also questioned about socially approved behaviors such as athletics and sports.

Table 98 shows the correlations of these behaviors to each other. In general, among the college students, theft and sexual relations are correlated with drug use, particularly with the use of marijuana, alcohol and tobacco. First experiences with sex and theft occur on the average after the first use of alcohol and tobacco and before the first use of other drugs. Cheating, speeding and sports showed no consistent relationship to drug use probably because these behaviors are engaged in to a fairly high degree by most subjects (drug users and non-users alike).

The picture which emerges from the above relationships is that of a youthful drug user who tends to depart from social norms in several significant aspects of his behavior. He joins others in the usual amount of behaviors such as cheating and speeding and exceeds them in "theft" and "sexual intercourse." At least in the college group, drug users were not significantly less active in sports.

Drug Use, Age and Religion (School Sample): The junior and senior high school data provided an opportunity to look for trends in drug use over a fairly wide age range, and between sizeable groups of Catholics and non-Catholics. The religious sect appears unrelated to drug use. Girls tended to use alcohol and marijuana more as they became older but there was no significant relationship with any other drug. In this sample girls who were going to use the "less popular" drugs tended to do so early in the age sequence and to show little change in frequency with increasing age.

Males included smoking, unprescribed use of aspirin and the use of amphetamines along with alcohol and marijuana in the group of behaviors which increased with age. Other types of drug use had no significant change with age. Only use of marijuana, alcohol and aspirin shows significant increase with age when males and females are combined.

Drug Use by Sex (Junior and Senior High Only): Although males tended to use somewhat more of all drugs except unprescribed aspirin than females, none of these trends reached a statistically acceptable level in the junior and senior high samples. Calculations have not yet been done on the college sample.

D. GENERAL COMMENTS

Those who are unfamiliar with the adolescent sub-culture of today may well be shocked at the above figures. Technically this means that up to 2/3 of our young people may be felons. Remember prohibition??? Other studies indicate marijuana use of somewhat lesser magnitude ranging from about 49% for females in Toronto, Canada (Toronto Addiction Research Foundation, 1968) through 18% in Phoenix (Phoenix Teen Gazette, 1969) to 83% in a sub-group of a Michigan sample (Bogg, et al., 1969). Are the San Diego youth more or less "moral" than others? It must be remembered that San Diego is as close to the Mexican sources of marijuana as it is possible to get in the U.S. A large military turnover from the Far East also opens up to some extent this source of marijuana. Southern California is also about as identified with the imagined "swinging youth" cultural image as is possible. All of these factors plus a relatively transient and recent resident population make it almost inevitable that our young people will be exposed to both the opportunity and the personal-cultural pressure to use marijuana.

It is to be expected that the more remote a group is from the drug scene the less likely they will be to use drugs and this is manifestly the case (see Boggs, *et al.*, 1969, for documentation of this point). Under such remote circumstances lack of drug use does not indicate moral character, just lack of peer or social pressure, tensions, and opportunity. However, a recent report from Redwood City, California, on research done by Dr. Stanford Rossiter (San Diego Evening Tribune, August 4, 1969, p. D-5) quotes figures quite comparable to those found here. Perhaps just being in California is sufficient.

All of the above does not excuse the use of marijuana or make its use desirable. It simply says that a large majority of perfectly ordinary people will engage in a socially disapproved and somewhat dangerous behavior when the circumstances are favorable. The case of marijuana and the earlier case of alcohol both demonstrate this point and the utter futility of even constitutional amendments as "law and order" controls over such behavior.

To stop the behavior we must change the circumstances. The concluding remarks on page 223 offer suggestions which arise from the present research on how this might be done.

Part V.

Demographic Variables and Attitudes

This part of the report gets to the real crux of the research. Is there a relationship between attitudes and behavior? If such relationships can be discovered then it is possible to predict behavior from attitudes and to determine which attitude changes are most likely to lead to behavior changes.

A. THE CWU SAMPLE (4)

The results for this sample will be only briefly described. Male Catholics saw somewhat less individual risk in smoking both cigarettes and pipes and more individual risk in theft. The Catholic males also had less confidence in all 10 of the "actions." The female Protestants rated the individual risk of fighting higher and the social risk of fighting higher. The older females also expressed more confidence in the use of psychotherapy. The correlations in all cases mentioned were between .25 and .40 and statistically reliable.

Male smokers tended to rate individual risk (Sex-Pot factor) behaviors as less risky. These males also tended to devalue persuasive actions. There were few significant correlations between legal drug use and attitude ratings for the females and the same was true for use of medical care. Males who used more medical care favored coercive actions and felt marriage presented a greater individual risk. Both male and female smokers rated personal example as an effective action. Males high in drug use and use of medical care tended to devalue personal example. Again, the relationships mentioned in this paragraph were seldom larger than .35.

B. SAMPLES (5 - 8)

The Coronado adult sample (5) has not been analyzed in detail and it will only be mentioned when such reference contributes to the discussion of the results from the school and college samples.

RESULTS 1. SCHOOL SAMPLES

Sex and Attitudes (School Samples Only): "Masculine-aggressive" behaviors such as "drag racing," "sex," "fighting," "stealing" and "football" are rated as more risky by females on "the risk of losing friends." This type of risk serves to differentiate the sexes most clearly. Sexual behavior is a key area of disagreement, with girls seeing more risk of all types except from the law, and males seeing greater "gain" of all types.[3] Characteristically males also see greater value for the masculine-aggressive behaviors on the gain of "thrill" and "good feeling inside."

Females rate the actions of "personal example" and "parents" as the most effective deterrents or prevention factors for sex, drugs and drag racing behaviors.

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[3] Possible "gains" indicated in the instrument were: "Feeling Grown-Up or Adult," "More or Better Friends," "Thrill or Excitement," and "Good Feeling Inside."

In general the sex difference pattern is as might be expected. The girls show greater concern for social relationships, and a heightened perception of risk and less expectation of gain from aggressive behavior and sexual intercourse.

Differences in Age Patterns with Attitudes Between Males and Females (School Samples Only): Risk of personal injury is seen by older boys to be greater for such behaviors as "protesting," "football," and "gang fighting" while less for "sex" and "drinking." Older girls rate "smoking," "drinking," "abortion," "drag racing," "gang fighting" and use of "opiates" as having a relatively higher risk of personal injury. Older girls also see less injury risk from changing one's place of residence.

Older boys see as lesser risks the loss of "self-respect," "loss of friends" and from the "law" from "smoking," "drinking" and "abortion." They also see less risk of "loss of friends" from the use of marijuana and pills and less danger from the "law" from sex. Older females show a similar pattern and also see less risk of all types from driving and motorcycling. Secondary school girls do not however see less risk in abortion as they get older. They do see less risk from the "loss of friends" for "marriage" and a greater risk of the "loss of self-respect" and from the "law" from engaging in major theft.

In general both sexes see greater risk of injury from physically dangerous behaviors as they get older. The older students, however, tend to see less risk of a personal-social nature from drug use, sex and motoring.

Older boys anticipate greater gain of all types from engaging in sex activity and drinking alcoholic beverages. Older girls share the anticipation of more "good feeling" from sex but, as anticipated, they expect less gain of all types from behaviors such as "drag racing," "theft" and "fighting."

There is a low-level tendency for both older males and females to be less optimistic about most of the possible "actions"[4] to control behavior. Only a few of these trends reached statistical reliability, however, and there was no consistent pattern in the results.

Religion and Attitudes (School Samples Only): There were no consistent differences in attitude ratings for the boys due to religion. Girls, in contrast, had numerous differences between religious groups. Catholics and non-Catholics did not differ in their judgements of "injury risks," but non-Catholics were generally higher in their ratings on the risks of "loss of self respect," "loss of friends" and the "law." The greatest differences were on "smoking," "drinking" and use of other drugs. Non-Catholic girls also saw sex as more dangerous along with "aggressive behaviors" such as "fighting," "theft" and "drag racing."

There were no consistent differences in anticipated "gains" between the religious groups for boys and girls, but non-Catholic girls were more optimistic about most actions to control behavior.

It is interesting to note that while the non-Catholic girls saw more danger in a number of behaviors there were no reliable differences between the religious groups in actual frequency of behavior. In this case, at least, a perception of greater danger was no deterrent to behavior.

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[4] See Appendix III for list of possible actions suggested.

Relationships Between Drug Use and Attitudes (School Sample Only): There were striking correlations between drug use and the attitudes toward risk, gain and effectiveness of actions. As might be expected, users of a particular drug saw such use as being less risky, offering more gain and being less open for effective control than did non-users.

Table 106 shows the correlations between use of marijuana, tobacco and alcohol and the ratings of risk, gain and actions. These drugs were chosen since they were most frequently used. (The patterns for the other drugs are quite similar.) In each case the correlation between the use of a drug and the rating for that drug is shown.

Tables 107, 108, and 109 show the means and standard deviations for each category of drug use on "risks," "gains" and "control action" ratings respectively. The education, church and law enforcement action ratings on drugs are the only ones shown in Table 109 since these were the action ratings most closely related to drug use. The means in Tables 107 - 109 show the actual trends which underlie the correlations in Table 106 and which were discussed above. Smith (1967), in a study reviewing the prediction of smoking behavior cites the predictive efficiency of various mean differences. The question asked is, "If I called everyone above the mean of the combined 'user' and 'non-user' groups a 'user' and everyone below the mean a 'non-user' how often would I be correct?" As 50% prediction level is chance only. If the user group and non-user group mean differ by .5 Standard Deviation, accuracy of prediction would by 60% -- or exceeding pure chance by 10%.

TABLE 106.

Correlations Between Use of Drugs and Attitudes - School Sample
Coronado, 1969

			RISKS				GAINS			
			Injury	Self Respect	Lose Friends	Law	Adult Feeling	Good Friends	Thrill	Good Feeling
MARIJUANA	MALES	Junior High	-605	-387	-433	-469	260	334	354	348
		Senior High	-656	-670	-558	-364	(220)	(214)	492	433
		TOTAL	-637	-579	-514	-380	208	242	433	396
	FEMALES	Junior High	-393	-569	-592	-451	392	750	435	527
		Senior High	-670	-598	-598	-632	(209)	326	562	412
		TOTAL	-561	-606	-609	-414	287	485	466	569
	GRAND	TOTAL	-600	-593	-561	-398	250	363	452	480
TOBACCO	MALES	Junior High	-366	-356	(-184)	-297	(-040)	(-080)	(-156)	(-003)
		Senior High	-269	-346	-324	-427	(061)	(160)	(214)	245
		TOTAL	-208	-419	-292	-230	(-018)	(033)	(025)	(182)
	FEMALES	Junior High	-420	-451	-441	-417	(-014)	264	276	380
		Senior High	-380	-320	-515	-303	(-058)	(225)	(058)	374
		TOTAL	-382	-394	-463	-370	(078)	225	(181)	356
	GRAND	TOTAL	-295	-406	-393	-393	(025)	(130)	(103)	241
LIQUOR	MALES	Junior High	-433	-395	-494	-455	(161)	409	(203)	(151)
		Senior High	-347	-393	-395	(-144)	276	(218)	306	387
		TOTAL	-466	-413	-516	-322	238	312	332	347
	FEMALES	Junior High	-408	-435	-611	-400	371	549	447	531
		Senior High	-352	-445	-513	(-097)	(089)	(-009)	(146)	(183)
		TOTAL	-383	-483	-598	-297	(142)	263	275	358
	GRAND	TOTAL	-430	-453	-560	-314	233	293	312	359
BEER	TOTAL MALES		-405	-379	-454	-301	(137)	279	297	356
	TOTAL FEMALES		-310	-286	-343	-286	(052)	(175)	360	319
	GRAND TOTAL		-401	-432	-524	-293	(164)	279	339	444

Negative figure means the more the user uses the drug the less danger he sees in its use (less perception -- less control).

Positive figure means the more gain the user sees in the drug the more gain he sees in its use.

( ) = p > .05 (all other correlations are significant at the 5% level or more).

TABLE 107.

Drug Use and Risk Ratings - Means, Standard Deviations and N's - School Sample
Coronado, 1969

Drug	Injury			Self Respect			Lose Friends			Law		
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N
MARIJUANA												
Never	3.893	1.296	140	4.065	1.241	139	3.800	1.374	140	4.421	.953	140
1 - 2 times	3.160	1.106	25	2.609	1.305	23	2.240	1.165	25	3.680	1.282	25
5 - 10 times	2.167	1.193	12	2.250	1.288	12	2.000	1.044	12	4.083	.900	12
11 - 15 times	1.909	.701	11	2.250	.965	12	2.167	1.115	12	3.333	1.435	12
Regularly	1.536	.744	28	1.643	1.062	28	1.429	.790	28	3.107	1.397	28
TOBACCO												
Never	3.521	1.145	71	3.071	1.448	70	2.662	1.444	71	3.681	1.300	69
1 - 2 times	3.500	1.056	36	2.714	1.296	35	2.167	1.183	36	3.389	1.293	36
5 - 10 times	2.850	1.089	20	2.000	.973	20	1.700	.923	20	3.000	1.453	19
11 - 15 times	3.074	1.141	27	2.370	1.305	27	1.963	1.255	27	3.000	1.442	26
Regularly	2.689	1.162	61	1.639	1.096	61	1.377	.734	61	2.233	1.345	60
ALCOHOL												
Never	3.481	1.276	52	3.353	1.440	51	2.942	1.526	52	3.760	1.437	50
1 - 2 times	3.264	1.022	53	2.558	1.320	52	2.264	1.211	53	3.340	1.239	53
5 - 10 times	3.185	1.178	27	2.333	1.301	27	1.704	.953	27	3.385	1.203	26
11 - 15 times	3.000	1.111	35	2.000	1.111	35	1.657	.873	35	2.676	1.492	34
Regularly	2.800	1.195	50	1.580	.992	50	1.260	.565	50	2.122	1.269	49

$\bar{X}$ -- Means

SD -- Standard Deviations

N -- Number

TABLE 108.

Drug Use and Gain Ratings - Means Standard Deviations and N's - School Sample
Coronado, 1969

Drug	Adult Feeling			Gain Friends			Thrill			Good Feeling Inside		
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N
MARIJUANA												
Never	1.812	1.332	138	1.686	1.090	139	2.029	1.398	139	1.759	1.292	137
1 - 5 times	2.200	1.323	25	2.250	1.359	24	3.160	1.491	25	2.958	1.459	24
5 - 10 times	2.167	1.403	12	2.333	1.303	12	3.583	1.165	12	3.273	1.348	11
11 - 15 times	3.250	1.545	12	3.083	1.621	12	4.083	1.311	12	3.909	1.514	11
Regularly	2.630	1.690	27	2.926	1.730	27	3.778	1.528	27	3.654	1.696	26
TOBACCO												
Never	1.743	1.236	70	1.739	1.196	69	1.746	1.239	71	1.522	1.158	69
1 - 5 times	1.944	1.393	36	1.771	1.165	35	1.611	1.153	36	1.457	.950	35
5 - 10 times	1.750	1.251	20	1.900	1.071	20	1.737	1.098	19	1.944	1.305	18
11 - 15 times	1.923	1.230	26	1.577	.809	26	1.667	.877	27	1.222	.641	27
Regularly	1.833	1.107	60	2.186	1.167	59	2.066	1.276	61	2.407	1.510	59
ALCOHOL												
Never	1.980	1.435	51	1.615	1.051	52	2.058	1.461	52	1.769	1.293	52
1 - 5 times	2.250	1.384	52	1.750	1.118	52	2.113	1.340	53	1.925	1.238	53
5 - 10 times	2.346	1.441	26	2.115	1.366	26	2.833	1.523	24	2.519	1.312	27
11 - 15 times	2.743	1.221	35	2.229	1.140	35	3.125	1.400	32	3.032	1.494	31
Regularly	2.840	1.448	50	2.560	1.327	50	3.100	1.389	50	3.000	1.555	49

$\bar{X}$ -- Means

SD -- Standard Deviations

N -- Number

TABLE 109.

Drug Use and Action Ratings - Means, Standard Deviations and N's - School Sample
Coronado, 1969

Drug	Education			Church			Law Enforcement		
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N
MARIJUANA									
Never	2.724	1.577	134	2.619	1.491	134	3.114	1.514	132
1 - 5 times	2.000	1.180	24	1.870	1.014	23	2.458	1.382	24
5 - 10 times	1.833	1.030	12	1.833	1.115	12	2.417	1.311	12
11 - 15 times	1.545	1.214	11	1.364	.924	11	2.545	1.635	11
Regularly	1.565	1.237	23	1.391	.941	23	1.522	.846	23
TOBACCO									
Never	2.970	1.614	67	2.727	1.484	66	3.169	1.516	65
1 - 5 times	2.657	1.514	35	2.657	1.697	35	3.400	1.397	35
5 - 10 times	2.150	1.496	20	1.750	.910	20	2.856	1.531	20
11 - 15 times	2.042	1.268	24	2.333	1.341	24	2.333	1.341	24
Regularly	1.821	1.266	56	1.732	1.104	56	2.196	1.432	56
ALCOHOL									
Never	2.979	1.695	48	2.875	1.593		2.978	1.667	46
1 - 5 times	2.600	1.539	50	2.641	1.497		3.320	1.449	50
5 - 10 times	2.333	1.414	27	1.852	1.064		2.815	1.389	27
11 - 15 times	1.818	.983	33	1.844	1.247	32	2.182	1.211	33
Regularly	2.000	1.476	46	1.848	1.154		2.500	1.546	46

$\bar{X}$ -- Means

SD -- Standard Deviations

N -- Number

1.00 Standard Deviation = 69% (19% over chance), 1.5 Standard Deviation = 77% (27% over chance), etc. These accuracy figures depend on normal distributions and equal sample sizes and equal standard deviations. Since none of these conditions are clearly met in the present data the above accuracy figures should be considered as valuable but rough guides.

Both the sizes of the correlations in Table 106 and the differences between the means in Tables 107 - 109 show that well beyond chance prediction can be made from a single attitude measure. For example, on the risk of "losing friends" rating for marijuana the non-users average is over 2 Standard Deviations (SD) higher than the regular users. If the overall average on this rating were used to classify students into "users" and "non-users," approximately 85% of regular users would be correctly identified. Of course, many occasional users would also be identified as regular users as would a few non-users. About 15% of the regular users could also be misclassified as "non-users." If several ratings were combined, accuracy of prediction could be further refined.

A very rapid and useful approach to prediction would be to make "profiles" of the user and non-user patterns of means (see Figures 42 and 43). Such profiles could be placed on transparent overlays and the pattern for any given individual or group compared to that of the criterion profiles. Degree correspondence with the "user" pattern could be roughly determined. While this approach may not be statistically satisfying it is a most useful one for teachers and others who do not have access to computer facilities. A more refined approach would be the use of multiple regression studies (see page 199 for an additional discussion).

COMMENTS

Use of the RTAQ for Prediction: Several comments need to be made at this point. Before we rush off to use the RTAQ to identify drug users, it should be remembered that the RTAQ was administered under conditions which assured the complete privacy of the respondent. The questions on the RTAQ are obvious in their intent and any reasonably bright student could be expected to falsify splendidly when under duress.

We also are in no position at this point to say whether the attitude pattern preceeds or follows use of drugs. The only feasible and humane use of the RTAQ with individuals would be to identify those who are *predisposed to drug use well before such use actually starts and to concentrate on helping such persons to avoid drugs.* The ultimate usefulness of the RTAQ in such a program can only be shown by following the same individuals over a number of years under conditions which protect them from any retaliation for completely honest cooperation.

For groups, however, the RTAQ could be readily used as it was here to determine the probable degree of drug use and to map shifts in such use as a function of educational (school curriculum and co-curriculum) or other (community-wide, church or civic) programs. It might also prove useful in identifying target groups which have the highest probability of developing drug problems so that a special effort can be made to help these groups. An example of such use would be to compute scores which best discriminate users and non-users of a particular drug in a given group. Present non-users could then be scored and the percentage of "predisposed" or "susceptible" potential future drug users could be estimated. Such estimates would be an invaluable guide for planning prevention programs (see page 211 for an application of this procedure).

Another potential use of the RTAQ in the Coronado program would be to periodically administer it (yearly, if possible) as a positive indicator of attitudinal and drug use changes within the school system. Potential problem areas (classes or individuals) could be spotted before the situation reached crisis dimensions and effective educational steps toward prevention could be planned and carried out.

Any punitive action such as increased police or other "official" surveillance (excluding, of course, confidential, cooperative school and family approaches) after administration of the RTAQ would probably quickly destroy its usefulness as a positive tool for preventative action.

Age and Sex Differences: Although the relationships between drug use and attitudes were relatively stable over age and sex groups and generalizations can be reliably made without considering sex and age, there are specific differences associated with age and sex (see Table 106). It seems likely that the most precise results will require an analysis for each age and sex group. As expected there is, for example, some tendency for older groups of drug users to rate behaviors as less risky than younger ones. Younger users of marijuana tend to see more gain of "adult feeling" and "gaining friends" and

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the reverse is true on the gains of "thrill" and "good feeling." This suggests a shift in reasons for drug use with age -- younger groups say "it makes me feel more adult (mature)," while older students seem more influenced by the sensory "feeling."

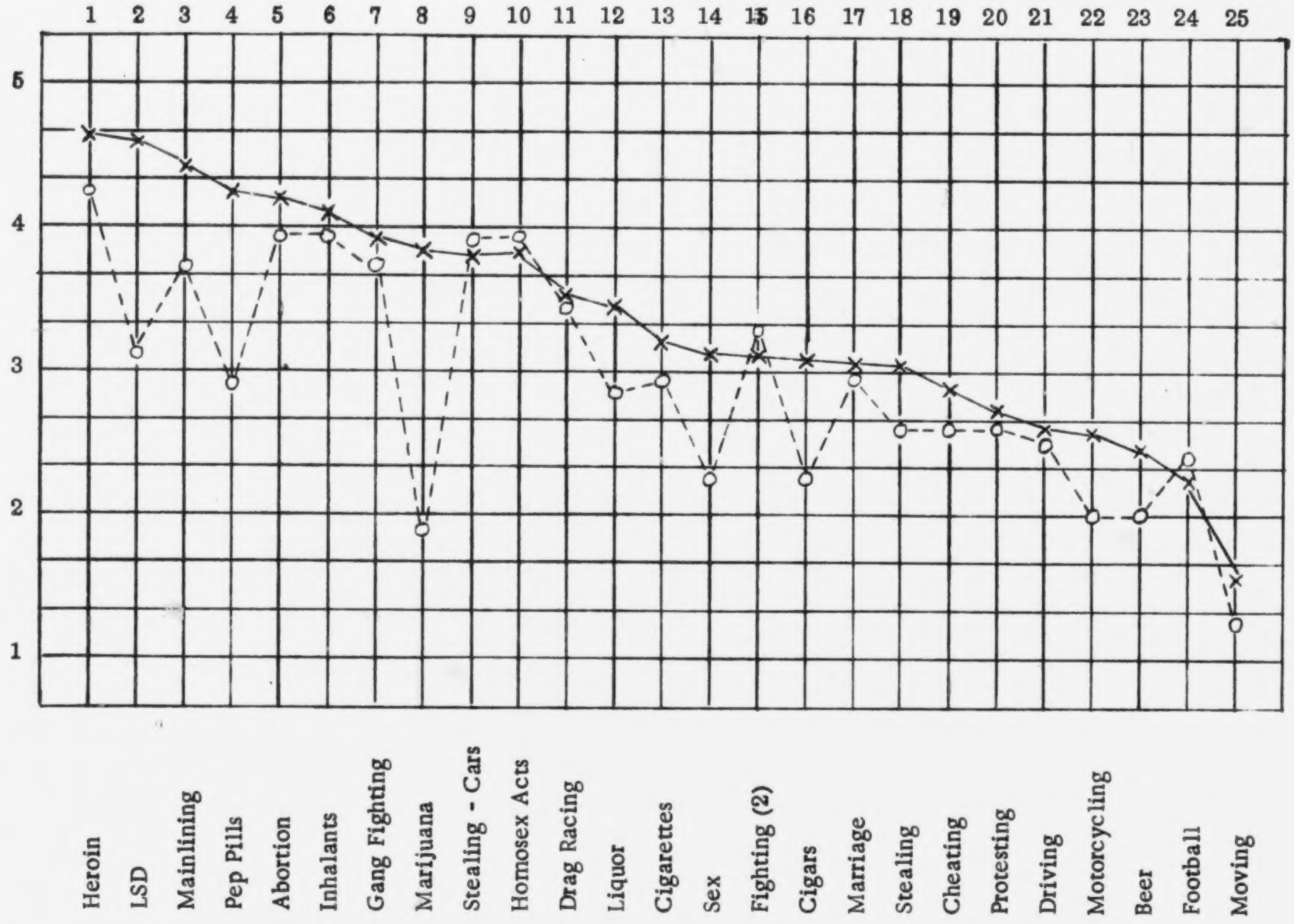
There may well be a somewhat different pattern for each type of drug for each age and sex. Table 106 shows a quite different pattern (particularly of "anticipated gain") for marijuana, tobacco and alcohol. Junior high school girls show rather high "gain" anticipation if they use tobacco or alcohol. This expectation of gain tends to disappear in senior high. A somewhat reversed pattern holds for the males. These outcomes, correlated with the findings presented earlier (page 132), show that there is relatively little increase in drug use -- other than alcohol or marijuana -- with age for the females. It may be that the girl drug "users" quickly find much of the "gains" they were seeking from the use of tobacco and alcohol and move on to other drugs such as marijuana. The boys may still find some gain in the conventional drugs which are "masculine-aggressive" in their grouping with the other behaviors. To break these age conclusions down to specific drugs, larger samples will be needed of each sex at each age.

RESULTS 2. SCHOOL SAMPLES

Patterns of Drug Use and Attitudes: Although Tables 106 - 109 show only ratings specific to each drug being considered, the data indicates much higher relationships between the use of tobacco and ratings (risk and gain) of marijuana than ratings of tobacco. (For example, the use of tobacco has a lower correlation with the injury risk rating of tobacco than with the injury risk rating of marijuana.)

FIGURE 42

Use of Marijuana and Injury Risk Ratings
Total Coronado School Samples - 1969



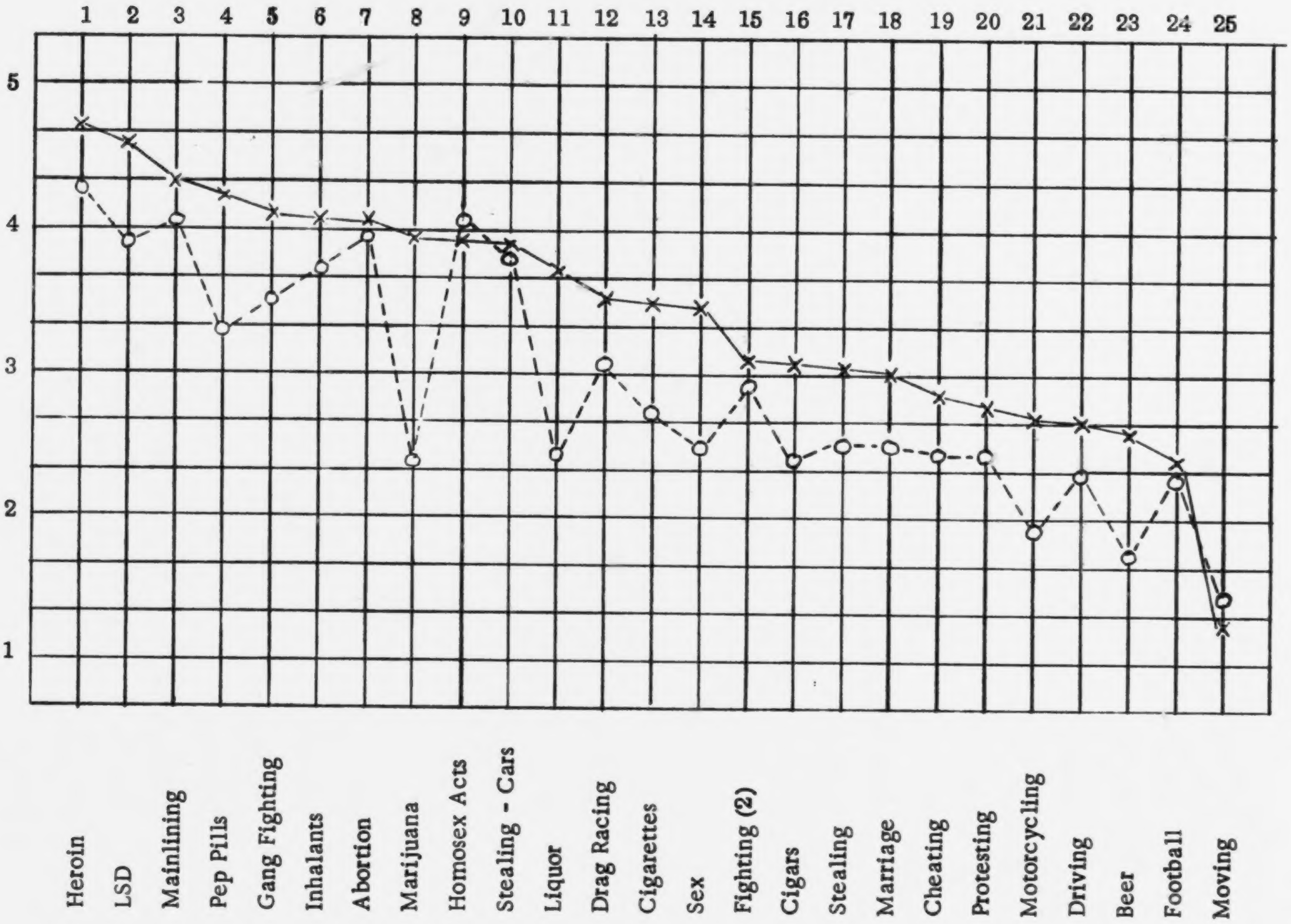
NOTE: Behaviors rank ordered by non-user means.

o- - - -o Heavy users n = 28, SD ≥ 1.0

X———X Non-users n = 140, SD ≥ 1.2

FIGURE 43

Use of Cigarettes and Injury Risk Ratings
Total Coronado School Samples - 1969



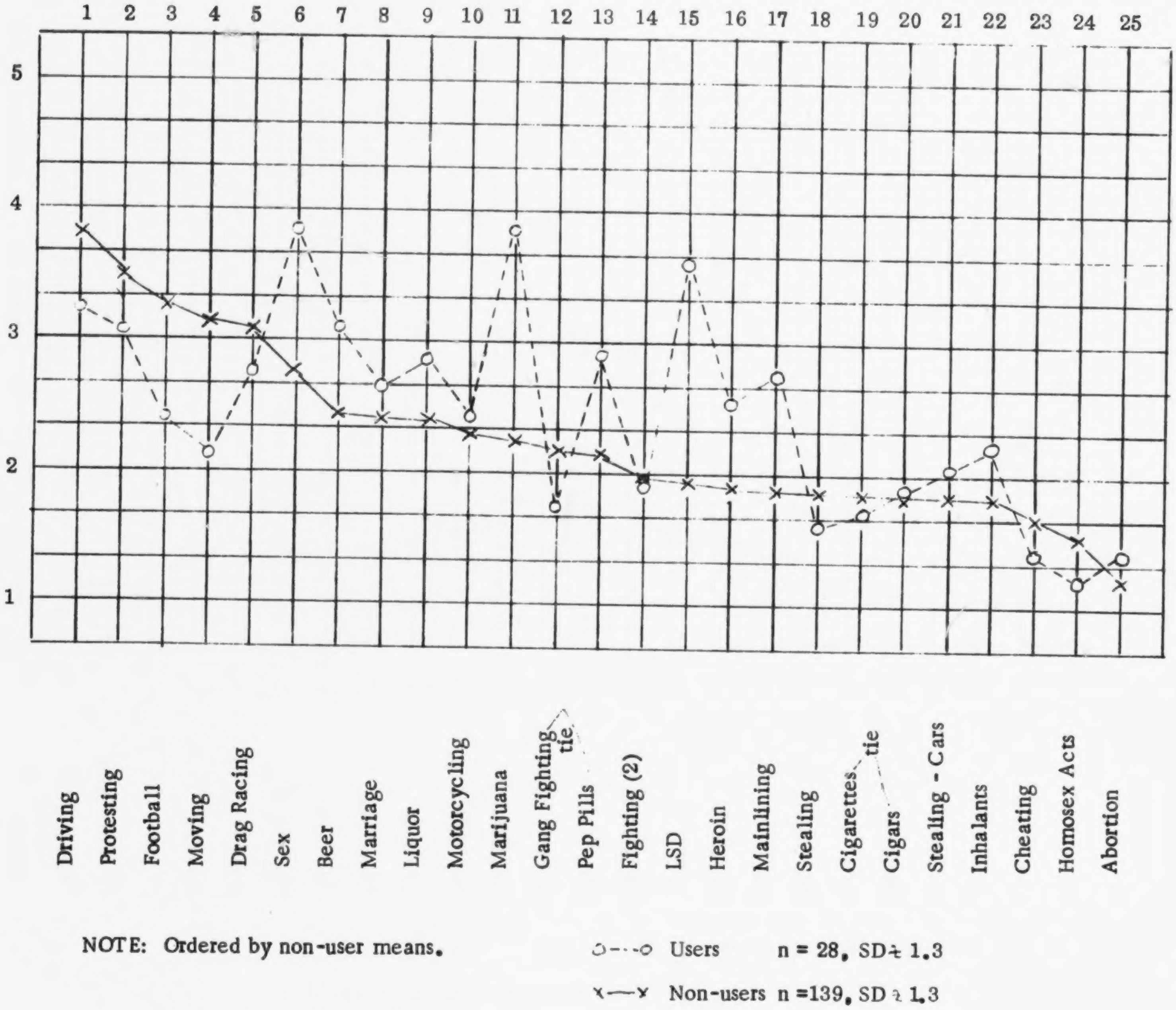
NOTE: Behaviors rank ordered by non-users.

o---o Heavy users n = 61, SD ≈ 1.0

x——x Non-users n = 71, SD ≈ 1.2

FIGURE 44

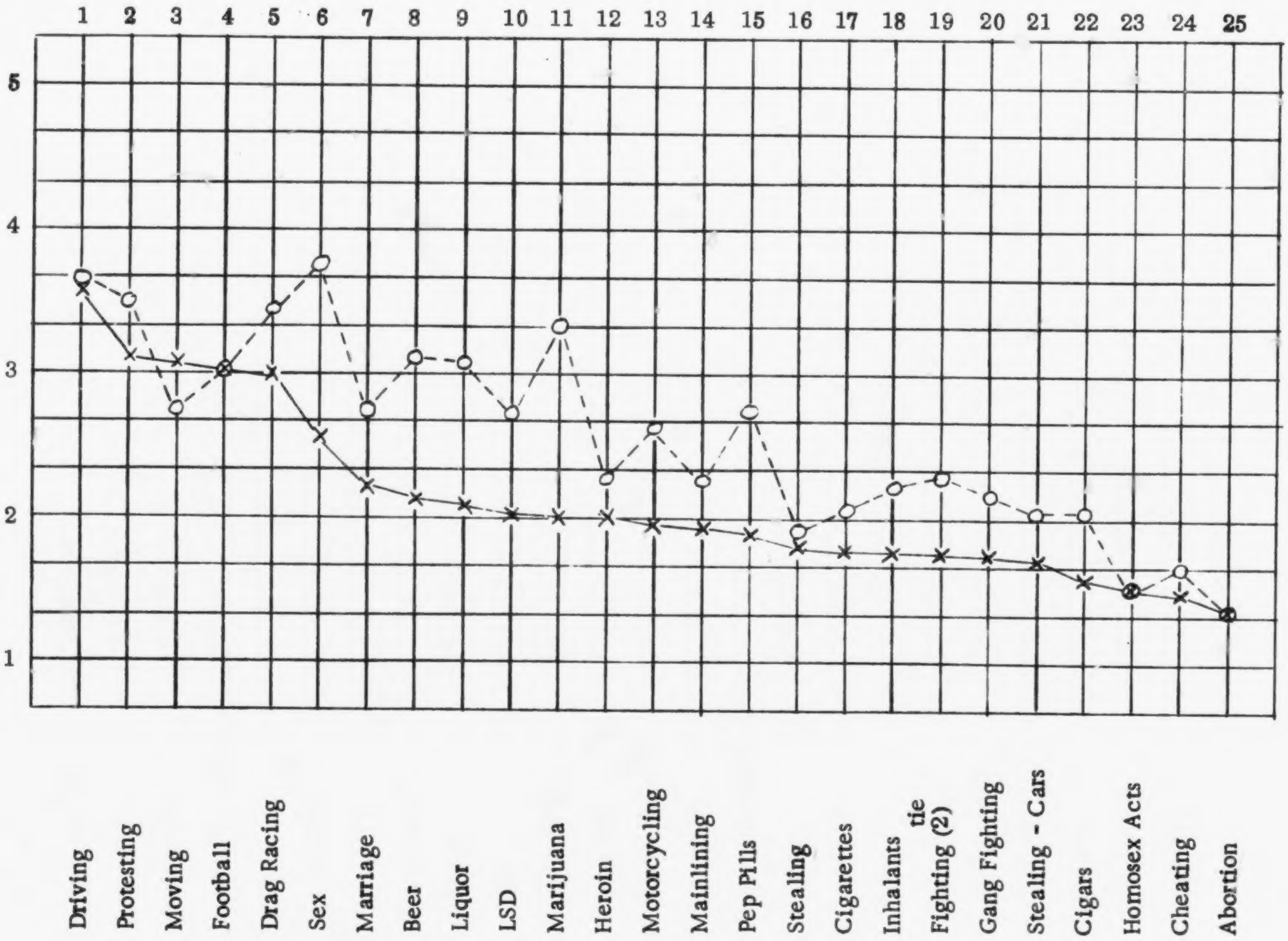
Use of Marijuana and Gain of Thrill Ratings
Total Coronado School Samples - 1969



NOTE: Ordered by non-user means.

FIGURE 45

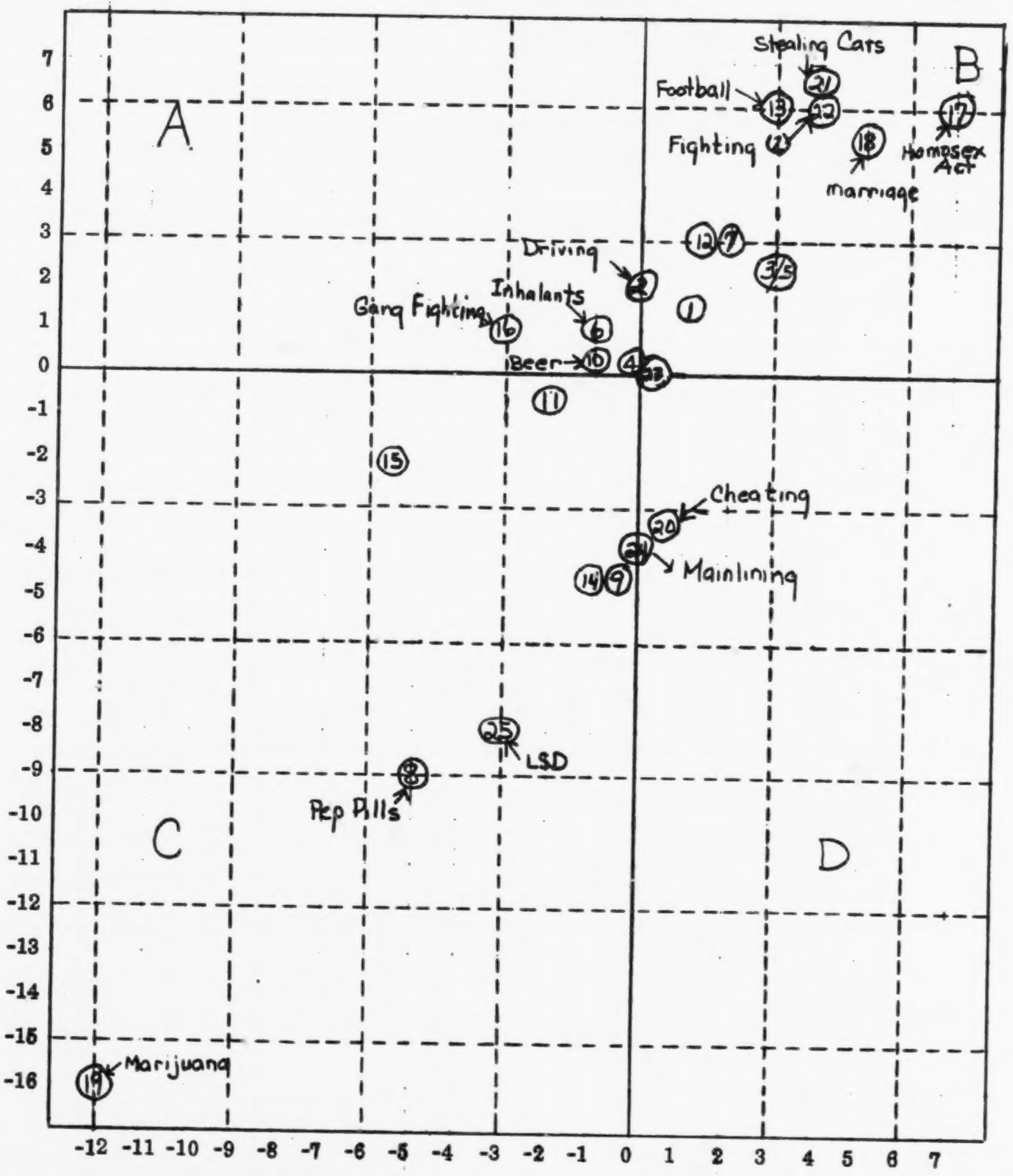
Use of Cigarettes and Gain of Thrill Ratings
Total Coronado School Samples - 1969



NOTE: Ordered by non-user means o--o Users n = 60, SD ≈ 1.3
x—x Non-users n = 71, SD ≈ 1.3

FIGURE 46

Comparison of Mean Differences for Tobacco and Marijuana Users and Non-Users of Injury Risk Ratings Total Coronado School Samples - 1969



NOTE: Quadrant A values indicate that Marijuana users saw relatively more risk than non-users, while Tobacco users saw relatively less risk than non-users.

Quadrant B indicates that both users saw relatively more risk than non-users.

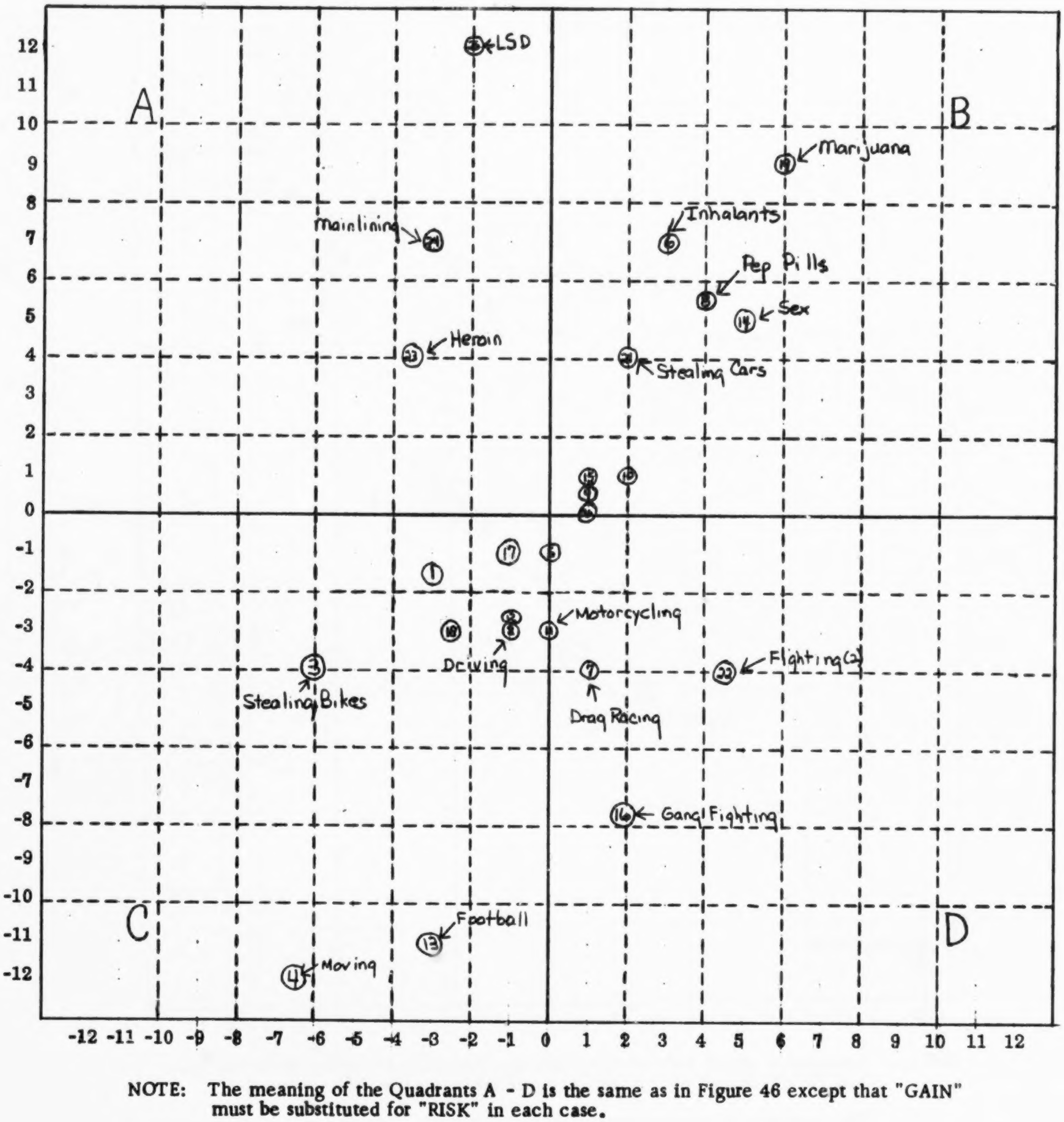
Quadrant C indicates that both users saw relatively less risk than non-users.

Quadrant D indicates that Marijuana users saw relatively less risk than non-users, while Tobacco users saw relatively more risk than non-users.

The behaviors are numbered from 1 - 25 in the order they appeared on the RTAQ. Discriminate behaviors are labeled.

FIGURE 47

Comparison of Mean Differences for Tobacco and Marijuana
Users and Non-Users on Thrill Gain Ratings
Total Coronado School Samples - 1969



NOTE: The meaning of the Quadrants A - D is the same as in Figure 46 except that "GAIN" must be substituted for "RISK" in each case.

Similarly, alcohol use is as closely associated with ratings of marijuana as with ratings of alcohol. Figures 42 - 45 show patterns of averages over the risk ratings and gain ratings for marijuana and tobacco regular users and non-users in the total sample. The behaviors are ordered according to the mean ratings of the non-user groups.

Behaviors which have appeared on the "sex-pot" (sexual behaviors and drug use) factor (grouping of ratings) tend to be seen by regular users as offering less risk and more gain than is seen by non-users.

The "masculine-aggressive" behaviors such as "fighting" and "football" showed either little difference or reversed patterns of difference between the groups of users and non-users.

Figures 46 and 47 compare the mean differences shown in Figures 42 - 44. On "injury risk" ratings both marijuana and tobacco users show highly related patterns (see Figure 46). Quadrants A and D indicate behaviors where the two groups disagree and the quadrants B and C indicate where the two groups agree in the direction of the mean differences. The differences shown are for ranks. The means were ranked from 1 - 25 for each group and then the ranks were subtracted (non-user - user) to obtain the data which is shown in Figures 46 and 47. There are no large disagreements in quadrants A and D. Quadrant B shows that for behaviors such as "football" and "major theft" the non-users saw relatively less risk while the users saw less risk for marijuana and other drugs.

Figure 47 shows essentially a mirror image pattern on the gain of "thrill" or "excitement" ratings. In this case, however, the marijuana users saw relatively more gain than the tobacco users from using more dangerous drugs (quadrant A) and relatively less gain for behaviors such as "fighting" and "drag racing." These findings offer a suggestion as to the manner in which users of various drugs may be eventually sorted out. Although the users of marijuana have nearly all tried tobacco and alcohol, not all tobacco and alcohol users go on to use marijuana. Most marijuana users also do not go on to the more dangerous "hard" narcotics.

It may prove possible, therefore, to discriminate among users in a manner similar to that outlined earlier for users and non-users. For example, we can relatively easily determine whether a boy or girl smokes or uses alcohol with less of the type of legal and emotional problems that follow "discovery" and being "busted" because of the use of marijuana or other illegal drugs. It is clear from the data that the tobacco-alcohol users, as a group, have a much greater chance of going on to other drugs. It may be more economical, however, to be able to concentrate on those among the tobacco-alcohol users who have the highest probability of going on to other drugs. We may be able to do this by direct use of the RTAQ.

Drug Use and Multiple Ratings (Factors) -- School Samples Only: Five factors or clusters of ratings were computed for males and females separately for each grade in school. Such factors indicate which ratings are related to each other. The findings presented previously have shown a factor which involved attitude ratings of drug use and sexual behavior (the "sex-pot" factor). This factor is usually the first one to be extracted by the computer, which fact indicates that these are the ratings which are the most highly related to each other. Another, somewhat less coherent group of ratings, was found which included such behaviors as "fighting" and "football." This factor we called the "masculine-aggressive" factor.

The factor structure has been discussed in detail in another section of this report (see page 95). For the present purposes it suffices to say that above mentioned two factors consistently appeared in the Coronado School data. A significant question is therefore, "Do the reported actual behaviors of drug use relate in any sensible way to the attitude factors?" It was expected that the sex-pot factor would be the focus of greatest interest and that users of illegal drugs would see less risk and greater gain from the ratings included in this factor. It was also anticipated that such drug users might see more risk and less gain from the masculine-aggressive behaviors while cigarette smokers and alcohol users would tend to be more favorable toward the masculine-aggressive behaviors than users of illegal drugs.

Tables 110 and 111 show the patterns of statistically significant correlations between the use of marijuana and the attitude ratings. The use of marijuana was again selected as the example because it is the most frequently used illegal drug and because the pattern for other illegal drug use is quite similar.

Let us look first at the data for the males in Table 110. The behaviors listed on the left in Table 110 are numbered to indicate the factor which they typically relate, #1 the "Sex-Pot" factor and #2 the "Masculine-Aggressive" factor. Some behaviors appear regularly in both factors (for example, cigarette smoking and beer drinking).

In general as the use of marijuana increases the rated risk of the F-1 behaviors becomes less, producing the inverse or negative correlations. However, the F-2 behaviors (Masculine-Aggressive factors)

TABLE 110.

Use of Marijuana and Ratings Correlations - Males - School Sample
Coronado, 1969

	RISK RATINGS								GAIN RATINGS							
	Injury Risk		Loss of Self Respect		Loss of Friends		Fear of Law		Adult Feeling		Gain Friends		Thrill or Excitement		Good Feeling Inside	
Behavior **	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS
Cigarettes 1,2			-.282	-.352	-.270	-.308	-.304	-.452								
Driving 2									(-.146)	-.376	(.041)	-.372	(-.208)	-.451	(-.072)	-.359
Stealing - Bikes			-.256	-.283	-.282	-.393	(-.195)	-.381			(-.064)	-.275				
Moving													-.439	(-.127)	-.339	(-.204)
Abortion 1											.427	(-.107)			(.012)	.301
Sniffing 1	-.388	(.110)	-.289	-.262	-.433	(-.166)	(-.206)	-.257								
Drag Racing 2									(.117)	-.305					-.253	-.347
Pep Pills 1	-.542	-.381	-.261	-.615	-.344	-.596	-.361	-.257					(.226)	.527	(.237)	.401
Cigars 1	-.408	(-.081)	-.303	-.412	-.242	(-.209)										
Beer 1,2	-.313	(-.142)									.251	(-.213)				
Motorcycling 1,2	(-.226)	-.247	(-.191)	-.352	(-.117)	-.403										
Protesting 2	-.253	(.065)									(-.191)	-.362	-.350	(-.242)	(-.128)	-.279
Football 2									(-.208)	-.326	-.247	-.397	-.410	-.304	-.326	-.385
Sex 1			(.010)	-.421	(-.047)	-.307										
Liquor 1	-.325	-.326	(-.238)	-.611	-.289	-.388	-.259	-.341			.289	(-.082)			(.079)	.256
Gang Fight 2	-.256	-.320	(-.093)	-.248	-.370	-.269										
Homosex Acts									.262	(-.068)	.284	(.172)			(.074)	.254
Marriage	-.261	(.056)	(-.125)	-.294	-.247	(-.269)										
Marijuana 1	-.605	-.656	-.387	-.670	-.433	-.558	-.469	-.364	.260	(.220)	.334	(.214)	.354	.492	.348	.433
Cheating					-.285	-.372										
Stealing - Cars 1			(-.175)	-.305	-.231	-.449										
Fighting (2) 2					-.293	(-.217)			(-.004)	-.281						
Heroin 1	-.276	(-.123)	(-.231)	-.399	-.411	(-.219)	-.372	-.247			.382	(.190)			.247	.396
Mainlining 1	-.357	-.286	-.478	-.559	-.406	-.274	-.459	-.427	.289	(.173)	.372	(.167)	.269	(.186)	.270	.437
LSD 1	-.245	-.584	-.307	-.719	(-.232)	-.677	(-.227)	-.564	.265	(.143)	.451	.360	(.226)	.422	(.231)	.569

NOTE: ( ) = p >.05 and the correlation is shown for comparison with one from another group.

Behaviors followed by:
1 = typically appears in the "Sex-Pot" factor
2 = typically appears in the "Masculine-Aggressive" factor

** JHS = Junior High School
SHS = Senior High School

TABLE 111.

Use of Marijuana and Ratings Correlations - Females - School Sample
Coronado, 1969

	RISK RATINGS								GAIN RATINGS							
	Injury Risk		Loss of Self Respect		Loss of Friends		Fear of Law		Adult Feeling		Gain Friends		Thrill or Excitement		Good Feeling Inside	
Behavior	** JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS
Cigarettes 1,2	-.304	(-.162)	-.440	-.370	-.304	-.462	-.314	-.276			.380	(.144)			(.315)	.305
Driving									-.297	-.266	.245	(-.198)	(.234)	-.276	.335	(-.205)
Stealing - Bikes					(-.244)	-.411			(-.195)	-.299						
Moving	(-.144)	-.263									-.277	-.331				
Abortion 1			(-.128)	-.326	(-.075)	-.444	(-.193)	-.320					(.186)	.341		
Sniffing 1			(-.143)	-.419	-.357	-.538	-.335	(-.180)					.380	.340	(.171)	.400
Drag Racing 1,2	-.413	(-.034)									.400	-.277	.434	(-.121)	.146	(.097)
Pep Pills 1	-.428	-.539	-.496	-.633	-.531	-.580	-.423	-.305			.541	(.222)	.273	.285	.570	.455
Cigars 1	-.429	(-.187)	-.414	-.288	-.401	-.539	-.383	-.261			.440	(.060)			.320	(.050)
Beer 1,2	-.340	(-.006)	-.425	(-.050)	-.359	(-.209)	-.392	(-.012			.400	(.043)			.536	(.216)
Motorcycling 1	(-.074)	-.307	(-.064)	-.306	(-.067)	-.327										
Protesting 2	-.264	(.024)					-.268	(.184)					.309	(-.107)	.408	(.063)
Football 2											(.241)	-.289	(-.040)	-.260		
Sex 1	-.256	-.372	(-.237)	-.589	(-.018)	-.474	(-.197)	-.304	(.135)	.404	.286	(.229)	.294	.354	.389	.576
Liquor 1			-.371	-.274	-.446	-.301	-.303	(-.010)			.591	(-.042)	.425	(.062)	.433	(.110)
Gang Fighting																
Homosex Acts					(.174)	-.311										
Marriage 1	-.261	(-200)	(-.098)	-.385	(-.195)	-.340					.394	(.163)	.353	(.111)	.396	(.115)
Marijuana 1	-.373	-.670	-.569	-.598	-.592	-.598	-.451	-.376	.392	(.209)	.750	.326	.435	.562	.527	.645
Cheating					(.125)	-.385	(-.198)	-.246								
Stealing - Cars 1					(-.095)	-.337	-.348	(-.071)								
Fighting (2)																
Heroin	(-.154)	-.397	-.315	-.401	-.307	-.604	-.309	-.531	.254	(.149)	.438	(.219)	.305	.278	.343	.270
Mainlining 1	(-.159)	-.406	-.413	-.597	-.346	-.632	-.487	-.517	(.222)	.253	.469	.282	.271	.412	.365	.525
LSD 1	-.309	-.564	-.408	-.671	-.515	-.772	-.316	-.606	.431	.348	.421	.358	.400	.421	.525	.604

NOTE: ( ) = p > .05 and the correlation is shown for comparison with one from another group.

Behaviors followed by: 1 = typically appear in the "Sex-Pot" factor
2 = typically appear in the "Masculine-Aggressive" factor

** JHS = Junior High School
SHS = Senior High School

tend not to be seen as more risky by marijuana users. Where there are significant correlations with F-2 behaviors they also are negative.

The "gain" ratings show that F-2 behaviors do tend to be rated by marijuana users as having less "gain" and F-1 behaviors as having more "gain."

Not all F-1 and F-2 behaviors have reliable correlations with the use of marijuana over all types of ratings and there are apparent and interesting differences between age groups. For example, the junior high school boys see less risk of injury from "inhalants," "cigars," "student protest" activities and early "marriage" while senior high school students see little relationship between the use of marijuana and these same injury risk ratings. "Sexual intercourse," on the other hand, is seen by the senior high school boys as less risky to their loss of self-respect and losing friends, but no such risk relationship is found by the junior high boys. "Homosexual acts" are seen by junior high school boys as promising more "gain of feeling grown up or adult" but not by senior high boys who use marijuana. Yet the reverse is true when applied to the "gain of good feeling inside." Junior high but not senior high boys expect more gain of "friendship" from taking the risk of abortion and use of liquor. Again, however, there is a reversal of this pattern when the rating of "good feeling inside" is considered. Senior high but not junior high boys expect to "gain" fewer friendships and to realize "less good feeling" from the risk of driving a car.

The pattern that emerges from these differences between junior and senior high boys includes behaviors such as "student demonstrating" or "protesting," "early marriage" and "cigar smoking" which may be identified with more adult status and are seen, therefore, as less risky by the younger marijuana users. The gains of "adult feeling" and getting more friends are see as being greater by the younger marijuana users for behaviors which also may be looked on as signs of "maturity" (drinking liquor, for example).

By the eleventh grade the attitudes relevant to marijuana use have shifted to behaviors such as sex and the gains of pleasure and tension relief ("feeling good inside"). The senior high marijuana users also anticipate less gain from the "masculine-aggressive" behaviors which may indicate a lack of success which the junior high boys have yet to experience. These age difference patterns should be considered only suggestive until they are confirmed by additional sampling. They do make a certain amount of common sense, however, and point to the types of emphasis that educational programs may need to have at different ages.

Table 111 shows that a very similar pattern to that for the boys holds true for the girls. "Cigarettes," "sex" and "marriage" are seen as offering more "gain" by the high school girl marijuana users. There are no significant correlations between marijuana use and these same "gain" ratings by the boys. The use of "cigarettes" and certainly "sex" and "marriage" are likely to be areas of greater potential concern (stress) for girls than boys and educational programs will need to take this into account.

"Drag racing" and "driving" are of particular interest in the data for the girls. Junior high school girls who use marijuana anticipate more "gain" while the senior high girls either show little relationship or expect less "gain" from these behaviors. In general the younger girl marijuana users indicate less risk and more "gain" in areas usually associated with older boys such as "driving" and "marriage." These relationships tend to disappear by the eleventh grade.

By way of comparison, Table 112 presents correlations between cigarette smoking and the attitude ratings for the total sample. The overall pattern is much like that found for marijuana use. The interesting difference is the appearance of "football" in the pattern. It may be recalled that football is one of the behaviors on the Masculine-Aggressive (F-2) factor. Figure 47 also shows how these F-2 behaviors may help to distinguish between the cigarette smokers who do and do not use marijuana.

Tables 113 - 115 depict the correlations between the "action" ratings and the use of marijuana and cigarettes. There is a very general tendency for drug users to be less optimistic about possible "actions." This is particularly true on the ratings of drug use and "sex" and least true on the ratings for "cheating." The actions of "dropping out" of school and finding someone to "love" showed little relationship to drug use. The junior high girl marijuana users saw significantly less effectiveness in most of the actions to control smoking, while the senior high girl marijuana users had very low correlations. But, in the instance of "psychotherapy," senior high girls saw more effectiveness for this "action" in controlling the habit. (See Table 114.) On most of the ratings of "action" (except those for smoking) the junior high boys had a larger negative correlation than the senior high boys between the use of marijuana and

TABLE 112.

Use of Tobacco and Ratings Correlations - Total School Sample Coronado, 1969

	RISKS				GAINS			
Behavior	Injury	Self Respect	Lose Friends	Law	Adult Feeling	Gain Friends	Thrill	Good Feeling
Cigarettes 1,2	-.295	-.406	-.393	-.393				.241
Driving				-.245				
Stealing - Bikes		-.284	-.374					
Moving								
Abortion 1		-.254	-.301	-.209				
Sniffing 1		-.294	-.327	-.308				
Drag Racing 2		-.268	-.285					
Pep Pills 1	-.312	-.383	-.413	-.280			.270	.233
Cigars 1	-.271	-.456	-.410	-.389				.201
Beer 1,2	-.351	-.309	-.356	-.299			.302	.305
Motorcycling 1,2	-.283	-.315	-.280	-.213				.236
Protesting 2								
Football 2		-.343				.211		.326
Sex 1	-.305	-.446	-.251	-.297	.245	.255	.327	.314
Liquor	-.384	-.234	-.443	-.355			.282	
Gang Fighting 2	-.248		-.250	-.228				
Homosex Acts				-.209				
Marriage			-.225	-.296				
Marijuana 1	-.446	-.446	-.448	-.315		.241	.358	.310
Cheating		-.261	-.272	-.254				
Stealing - Cars 1			-.339	-.279				
Fighting (2) 2				-.215				
Heroin 1		-.256	-.361	-.335				
Mainlining 1		-.315	-.272	-.347				
LSD 1	-.251	-.333	-.380	-.327				

NOTE: 1 = Sex-Pot factor behavior; 2 = Masculine-Aggressive factor behavior

TABLE 113.

Use of Marijuana and Action Ratings Correlations - Males - School Sample Coronado, 1969

	Smoking		Drag Racing		Sex		Drugs		Cheating	
Action	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS
Educate	(-.199)	-.248	-.281	(.084)						
Good Example	-.358	-.290	-.363	(-.120)	(-.173)	-.304	-.415	-.276		
Church			-.289	(.012)	-.259	(-.216)	-.378	(-.133)	-.268	(-.152)
Social	-.436	-.230	-.257	(-.069)	(-.232)	-.298	-.304	(-.234)		
Adv. Dangers	-.376	-.264	-.265	(.045)	-.360	(-.196)	-.361	-.323		
Parents	-.317	-.309	-.333	(-.187)	-.283	(-.172)	-.258	(-.237)	(-.148)	-.292
Love	(-.121)	-.261	(-.188)	-.327	-.316	(-.124)				
Law	-.391	-.362	-.356	(-.012)	-.408	(-.021)	-.312	(-.231)	-.258	(-.065)
Dropping Out							-.324	(.112)	-.321	(.105)
Psychological	-.263	(-.100)	-.377	(-.067)	-.295	(.060)	-.316	(-.145)	-.435	(-.021)

TABLE 114.

Use of Marijuana and Action Ratings Correlations - Females - School Sample Coronado, 1969

	Smoking		Drag Racing		Sex		Drugs		Cheating	
Action	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS	JHS	SHS
Education	-.499	(-.178)	-.344	(-.141)	(.040)	-.329	-.247	-.474		
Good Example					(.071)	-.397	-.261	-.441		
Church	-.296	(-.141)					-.324	-.410		
Social	-.444	(-.189)			-.272	(-.154)	-.352	(-.218)		
Adv. Dangers	-.257	(.078)					(-.236)	-.275		
Parents	-.315	(-.217)			(-.006)	-.331	(-.208)	-.496		
Love									.307	(.063)
Law	(-.197)	-.329					-.392	-.442		
Dropping Out										
Psychological	(.046)	.306	(-.028)	.370	(-.161)	.248				

NOTE: ( ) = p > .05

JHS = Junior High School
SHS = Senior High School

TABLE 115.

Cigarette Smoking and Action Ratings Correlations - Total School Sample Coronado, 1969

	Ratings				
Action	Smoking	Drag Racing	Sex	Drugs	Cheating
Education	-.398		-.278	-.315	-.217
Good Example	-.245	-.237	-.304	-.299	
Church	-.307	-.233	-.238	-.281	
Social	-.344		-.300	-.253	
Advertise Dangers	-.310		-.340	-.278	
Parents	-.272		-.239	-.282	
Love					
Law Enforcement	-.258			-.297	
Dropping Out					
Psychological	-.211		-.210	-.251	-.268

the "actions" (see Table 113.). The pattern for cigarette use is again quite similar to that for marijuana (see Table 115.).

Summary

The overall outcome of these relationships between drug use and clusters of ratings is to strongly confirm the original hypothesis: drug users do expect more gain, see less risk and possibility of control on those behaviors which belong to the F-1 or "sex-pot" factor. The F-2 or "masculine-aggressive" factor behaviors show promise in helping to discriminate between the users of alcohol and tobacco who are prone to use other drugs and those who are less likely to do so. There are variations in the overall pattern for sex and age groups which indicate that an analysis refined to take into account these differences will be essential when designing educational programs.

RESULTS 3. DRUG USE AND ATTITUDE RATINGS (COLLEGE SAMPLE)

A partial analysis of the data has been performed for the college sample so that only means, standard deviations, correlations and frequency distributions are now available. The major function of the college sample in the present report is to provide insight into a possible extension upward in age of the trends found in the public school sample. Will a group of college students in similar general social and geographic circumstances reflect the same sort of attitudes and behaviors as junior and senior high school pupils? If so, the probably validity of the analysis at a younger age is considerably enhanced.

The correlations between drug use and other behaviors has already been discussed (see Tables 103 and 104) and they were much like the correlations found for the school sample. The only increase in drug use in the college group compared to the school group is for the males and their use of marijuana. Other drug use is either comparable or less in the college group than in the high school groups. Less drug use is not surprising in the college group since these students have been highly selected by the college entrance procedures and the definitions of drug use used on the college sample were somewhat more severe (see Appendix IV). Still, the use of drugs by this select group is substantial.

The version of the RTAQ used in the college sample is a much simplified one and is presented in detail in Appendix IV. Only ten behaviors were selected to be rated. These behaviors are shown in Table 116. One type of risk rating -- that of personal-social nature -- was used since this area of risk seemed to be the most relevant one in the earlier research. The major new focus of the revised college RTAQ was on the motivation for drug use and the age and order in which drugs were used (see page 1~~4~~64 for discussion of the age and order results).

Five motive areas were selected: "Thrills and Pleasure," "Making Friends," "Fulfilling One's Sex Role," "Solving Problems," and "Achieving a Long Sought Personal Goal." Each behavior was rated for its relevance to these motives and the degree of importance of the motive itself was rated for each person.

TABLE 116.

Correlations Between Frequencies of Behavior and Rated Risk of Personal-Social Loss - College Sample - 1969

MALES, N = 48

FREQUENCY OF USE

	Marijuana	Cheating	Speeding	Sports	Sex	Theft	Opiates	Alcohol	Smoking	Pep Pills
Marijuana	-.339	(.120)	-.304	(.121)	(-.245)	(000)	----	(-.109)	(-.103)	-.345
Cheating	(-.200)	(-.131)	(-.162)	(.018)	(-.122)	(-.157)	----	(-.186)	(-.006)	(-.177)
Speeding	(-.063)	(.170)	-.261	(-.165)	(-.064)	(.048)	----	(.086)	(.001)	(-.032)
Sports	(.101)	(.113)	(-.102)	-.418	(-.119)	(.024)	----	(-.068)	.300	(.029)
Sex	(-.248)	(.129)	(-.026)	(.044)	-.490	(-.009)	----	-.300	(-.142)	(-.159)
Theft	(-.121)	(-.043)	(-.029)	(.025)	-.400	-.314	----	(-.141)	(.153)	(-.081)
Opiates	(-.147)	(-.065)	(-.241)	(.038)	(-.095)	(-.015)	----	(-.039)	(.035)	(-.141)
Alcohol	(-.096)	(.047)	(.086)	(-.106)	-.263	(.064)	----	-.305	(.127)	(-.032)
Smoking	-.315	(.075)	(-.213)	(.247)	(-.002)	(-.237)	----	-.346	-.329	-.412
Pep Pills	-.510	(-.037)	(-.037)	(.029)	-.309	(-.208)	----	-.297	-.398	-.643

FEMALES, N = 51

FREQUENCY OF USE

	Marijuana	Cheating	Speeding	Sports	Sex	Theft	Opiates	Alcohol	Smoking	Pep Pills
Marijuana	-.377	(-.165)	(-.149)	(.105)	-.294	-.347	----	(-.125)	(-.058)	(-.083)
Cheating	(.082)	(-.148)	(-.035)	(.039)	(-.029)	(-.034)	----	(-.147)	(.007)	(-.076)
Speeding	(000)	(-.121)	-.426	(.142)	(-.163)	(-.085)	----	(-.230)	(.078)	(.103)
Sports	(.171)	(-.023)	(-.002)	(.082)	(-.043)	(.045)	----	(.458)	(.096)	(.048)
Sex	(-.150)	(-.021)	(-.202)	(.045)	-.418	(-.021)	----	-.372	(-.121)	(-.111)
Theft	-.406	(-.157)	(-.243)	(.234)	(-.245)	-.595	----	(-.007)	-.287	(-.075)
Opiates	-.515	(-.022)	(-.011)	(.161)	(-.170)	-.415	----	(-.023)	(.024)	(-.212)
Alcohol	(-.195)	(.123)	(-.112)	(-.082)	(-.103)	(.249)	----	-.667	(.066)	-.335
Smoking	(-.011)	(-.151)	(-.007)	(-.007)	(-.046)	(.104)	----	-.3[illegible]0	-.305	(-.014)
Pep Pills	(-.242)	(-.077)	(-.040)	(.109)	(-.056)	(-.034)	----	(-.217)	(-.166)	-.275

NOTE: ( ) = p > .05. There were too few opiate users to calculate meaningful correlations. The underlined correlations on the diagonal are where the frequency and risk of the same behavior are compared.

Behavior and Risks: The correlations between frequency of the ten behaviors and their rated risk is shown in Table 116. The correlations shown on the diagonals are of the greatest interest since they show the correlations between the frequency and rated risk of the same behavior. In every case, except for females and "sports," the risk is seen as lowest by those who most frequently engage in the behavior (negative correlations). "Cheating" was the only case where these correlations were not statistically reliable (except for females and sports as previously noted). The correlations are quite similar in pattern to those for the school groups but somewhat lower on the average in magnitude. Drug users in general tended to rate the use of all drugs as less risky than did non-users. The use of marijuana was much less highly related to risk ratings of itself and of sex and the other drugs than it was in the school groups. There is a steady drop in the rated riskiness of marijuana with increasing age in the present groups and it may be that by the time a student reaches college this risk is no longer as large a consideration in the use of marijuana while gain becomes more important (see below).

Behavior and Gains: Table 117 shows correlations between the gain ratings and frequency of behavior for the college group. Only the relationships between a behavior and its own "gain" ratings are presented. The more general pattern was, as found in the school groups, with those who participate in any of the "sex-pot" (F-1) behaviors tending to see more "gain" for the other behaviors in the pattern.

Only "speeding" failed to have at least one significant

TABLE 117.

Correlations Between Frequencies of Behavior and Ratings of Gain for that Behavior - College Sample - 1969

		FREQUENCY									
GAINS	Sex	Marijuana	Cheating	Speeding	Sports	Sex	Theft	Opiates	Alcohol	Smoking	Pep Pills
Achievement	M	.424	.359	(.080)	(.185)	.512	.381	----	(.171)	.291	.464
	F	.389	.307	(.118)	(.246)	.402	.452	----	(.033)	(.189)	(.208)
Pleasure	M	.711	(.206)	(.051)	(.353)	.349	.452	----	.472	.518	.596
	F	.448	(.179)	(.151)	(.175)	.413	.703	----	(.219)	.579	(.238)
Friends	M	.596	(.221)	(-.009)	(.153)	.325	(.139)	----	.503	(.272)	.423
	F	.536	(.225)	(.146)	.323	(.023)	(.230)	----	(.211)	(.238)	(.010)
Sex Role	M	.484	(.201)	(.090)	.297	(.227)	(.032)	----	(.150)	.344	.381
	F	.292	(.070)	(.078)	(-.039)	.350	.793	----	(.077)	(.252)	(-.077)
Problem Solving	M	.452	(.080)	(.002)	(.141)	.371	(.147)	----	.358	.435	.279
	F	.332	(.080)	(.059)	(.170)	.422	(.104)	----	(.053)	(.165)	(.084)

TABLE 118.

Correlations Between Motive Ratings and Frequency of Behavior - College Sample - 1969

MALES (N = 48)

MOTIVE	Marijuana	Cheating	Speeding	Sports	Sex	Theft	Alcohol	Smoking	Pep Pills
Thrill	(.077)	(.102)	.318	(-.009)	(.079)	(.076)	(-.006)	(.042)	(.168)
Friends	(.062)	(.048)	(.228)	(.200)	(-.067)	(-.161)	(-.022)	(-.006)	(-.195)
Sex Role	(.017)	(-.034)	(-.008)	(.083)	(-.227)	(-.256)	(-.121)	(-.151)	(.013)
Problem Solving	(.139)	(-.260)	(-.092)	.371	(.208)	-.305	(.029)	(.032)	(.098)
Achievement	(-.223)	(-.037)	(.050)	(.189)	(-.131)	(.036)	(-.036)	(-.133)	-.399

FEMALES (N = 51)

MOTIVE	Marijuana	Cheating	Speeding	Sports	Sex	Theft	Alcohol	Smoking	Pep Pills
Thrill	(.241)	(.005)	(.050)	(-.016)	.348	(.104)	(.145)	(.080)	(.083)
Friends	(-.089)	(-.240)	(-.105)	(.003)	(.010)	(-.039)	(.197)	(-.122)	-.285
Sex Role	(-.060)	(-.122)	(-.003)	(.192)	(-.018)	(-.071)	(.059)	(-.219)	(-.076)
Problem Solving	-.284	(-.025)	(.034)	(.162)	(-.187)	-.433	(000)	-.284	(-.056)
Achievement	(-.018)	(.047)	(-.104)	(-.075)	(-.168)	(-.080)	(.122)	(-.158)	(-.088)

NOTE: ( ) = p > .05 and not statistically reliable. Since there are so few significant correlations they have been underlined for easy detection.

correlation with the "gains" ratings and even a pooling of the sex groups would not bring any "speeding" relationship up to an acceptable level of reliability. In contrast to the relatively low relationships between marijuana use and risk, the expected "gains" are higher on every "gain" rating for marijuana users and the correlations are at least as high as were obtained in the school groups (see Table 106).

Behaviors and Motives: Table 118 gives the correlations between the motive ratings and the frequencies of the behaviors. The presence of very few significant correlations indicates that, for the most part, those with high and low frequencies of behavior had similar motives. The relationship between the motive of "problem solving" and frequency of "theft" is the only one that held for both sexes (those who committed more thefts indicated but little interest in normal means of solving problems). The females who used more marijuana and tobacco were also less motivated for "problem solving." Males who were highly motivated for "thrills" did more "fast driving" while the females who wanted "thrills" engaged in more "sexual intercourse." Males who were highest in achievement motive used fewer pills and the females who used fewer pills were more highly motivated toward "friendship."

The obtained "significant" correlations between frequency of behavior and motivation shown in Table 118 should be viewed with caution until they are replicated with another sample. In ninety correlations it would be quite easy to have 9 of them reach "significance" by chance. Although the relationships that were found seem reasonable, there is no obvious pattern and they tend not to hold for both sexes. It should also be noted that the "motives" rated here represented an exploratory first attempt at definition. For example, "fulfillment of the sex role" is not spelled out and there were undoubtedly many variations used by the subjects. The major function of the motive ratings here is to use them to compare with "risk" and "gain ratings to see how the students do define each motive.

Part VI

Prediction of Drug Use

A. PREDICTION OF BEHAVIOR (SCHOOL SAMPLE)

ANALYSIS

The general stability of the means over types of ratings and the reliability of the factors led to a decision to pool the Risk, Gain and Action ratings in the school sample. This procedure sacrifices some of the subtle distinctions which arise from considering the ratings individually and which have been discussed in some detail earlier. However, a pooling of ratings yields a manageable set of 25 Risk, 25 Gain, and 5 Action scores for each subject (55 ratings in all). Such scores were used to attempt a first approximation of the kind of prediction of behavior that might be made from the risk-taking approach.

The age and sex groups were also pooled to obtain a sample size large enough to allow a reasonable computation with 55 scores (the number of subjects must be larger than the number of scores). This procedure also diminishes the precision with which predictions can be made for specific age and sex groups, but it gives a conservative estimate for the entire sample.

Using the 55 summary scores and the total sample, multiple regression equations were calculated for all of the reported frequencies of drug use except aspirin. After scanning the results it was determined that relatively little loss of prediction occurred if only the 20 "best" scores were used in the regression equation. Accordingly, drug use prediction scores were computed using the twenty "best" scores for each person on each of the eight drugs and distributions of these predicted scores were computed for each category of reported drug use. Drug use was trichotomized for all calculations into 0 = never used, 1 = infrequently used and 2 = regularly used as shown in Tables 98 to 103. Trichotomizations of the 5 available drug use categories also sacrifices some of the possible power of prediction. The inclusion of those who may have only tried a drug once in the "Infrequent" category is reasonable for marijuana and other illegal drugs, but is less reasonable for tobacco and alcohol. However, frequencies within the five original categories were often quite small and the predictions obtained are in error in the conservative direction on all of the counts of categorization, pooling of ratings, and pooling of age and sex groups. Such conservatism makes it possible to have confidence that at least as good outcomes can be obtained in the future. The distributions of predicted scores permit a comparison of the accuracies of prediction for each category of drug use for each of the four age and sex groups.

RESULTS

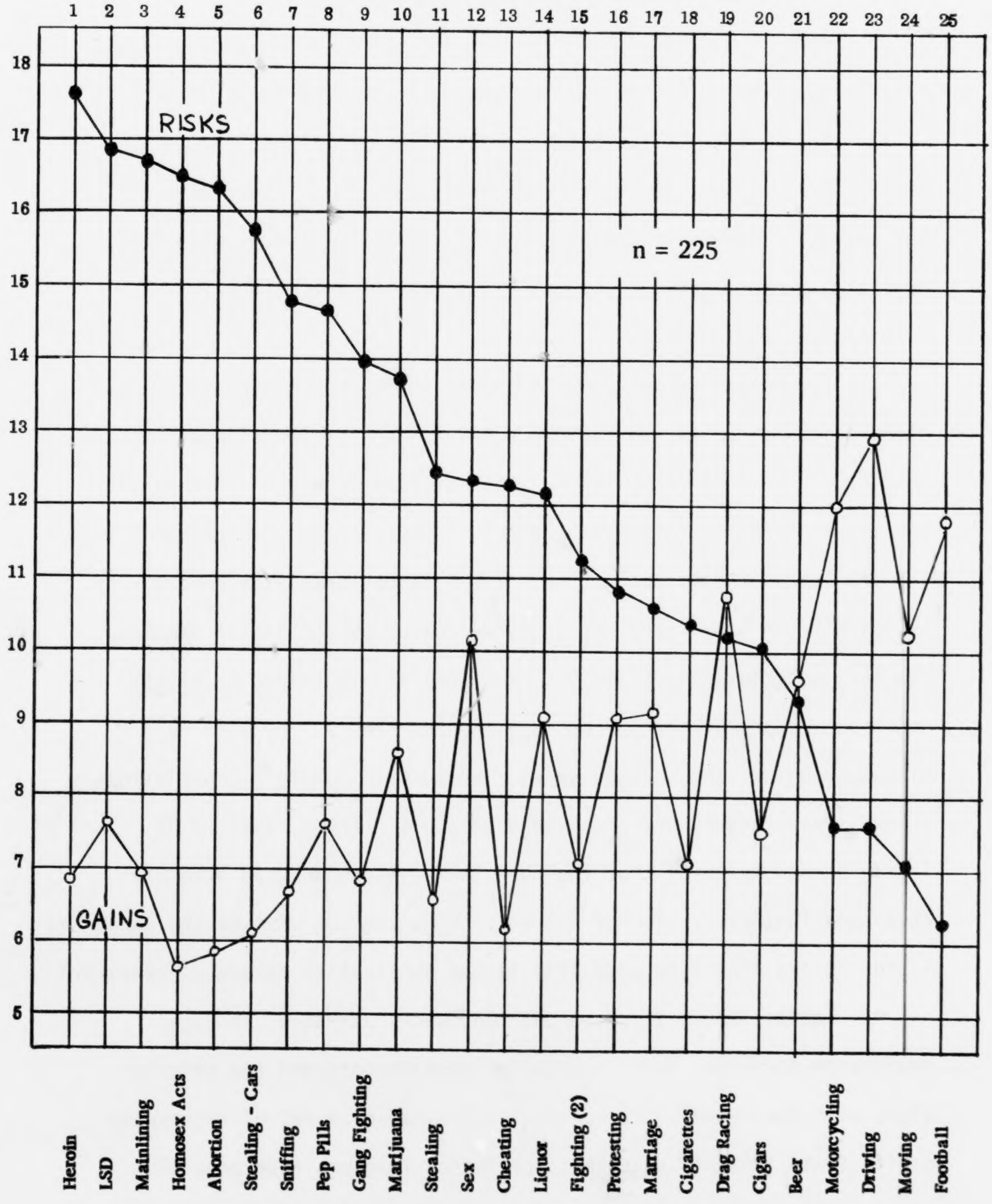
Means: Figures 48 and 49 show the means of the summed scores of the Risk, Gains, and Action ratings. The inverse (negative) correlation between Risk and Gain ratings is apparent in Figure 48. As the risk declines the gain ratings tend to rise. The orders of the means in Figures 48 and 49 are in excellent agreement with the orders of the individual ratings. This may be seen by comparison with Figures 22 to 34.

Regression Equations: Table 119 shows the multiple correlations using all 55 variables as predictors and for the 20 best predictors. All of these values are gratifyingly high, especially the value of .835 for marijuana which is approaching the top limit for any psychological prediction. These values should be regarded as approximations until they are cross validated by additional samples. However, correlations of similar magnitude were obtained on single measures in each of the present age and sex groups. As will be discussed below, the college sample showed high multiple correlations using similar scores and only two predictors. There seems to be little reason to doubt that the risk-taking approach used here will give excellent prediction of not only drugs use but most of the behaviors listed in the RTAQ (see page 216 for an application to sexual behavior).

Tables 120 to 127 give the top twenty variables in each regression equation, their regression coefficients and the correlations with the behavior in question. The use of a set of regression coefficients is similar to that for factor loadings (see page 17).

FIGURE 48

Average Summed Risks and Gain Ratings
Total Coronado School Samples - 1969

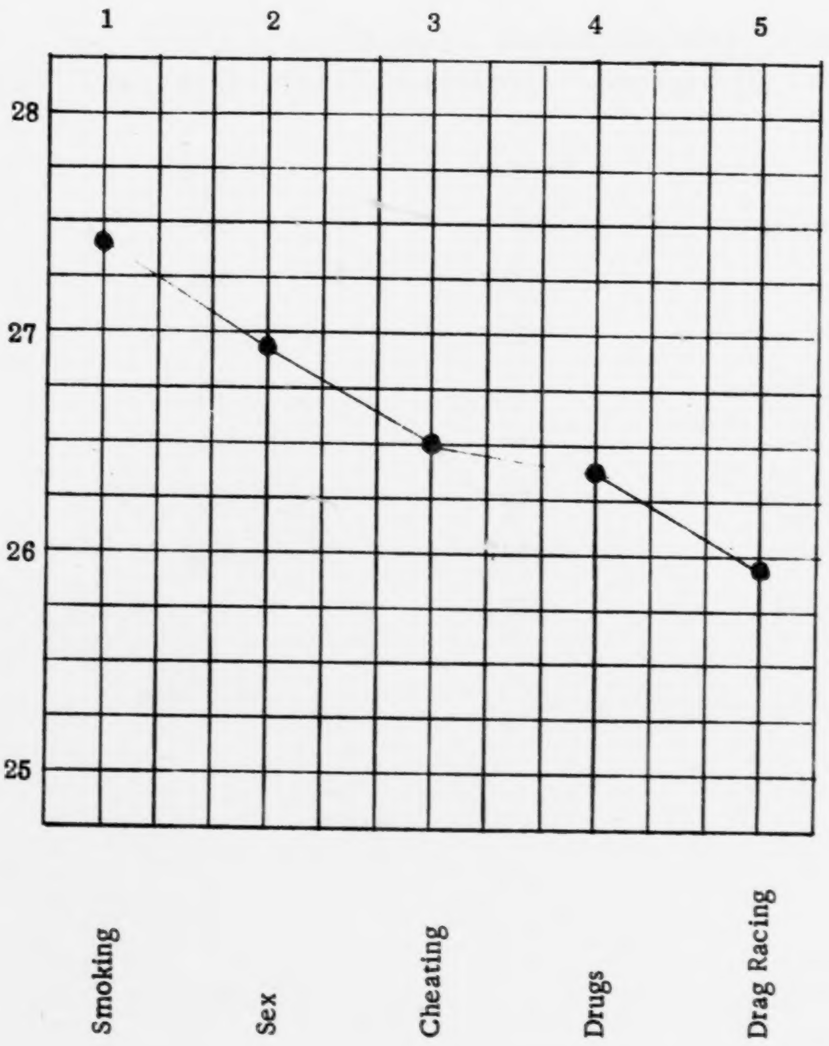


NOTE: Four ratings on a 1-5 scale have been summed for each behavior for risk and four for gain. The possible range is from 4-20. The behaviors are ordered by the risk averages. The Standard Deviation averaged about 3.00 and ranged from 2.40 - 4.86.

FIGURE 49

Average Summed Action Ratings
Total Coronado School Samples - 1969

n = 216



NOTE: Each mean represents the average of 10 ratings on a 1-5 scale. The possible range is from 10-50. The Standard Deviation averaged 9.50 and ranged from 8.84 - 10.43.

TABLE 119.

Multiple Correlations for Prediction of Drug Use Using 55 and 20 Scores - Coronado School Sample - 1969

	55 Scores	20 Scores
Marijuana	.835	.825
LSD	.684	.664
Amphetamines	.753	.736
Barbiturates	.719	.706
Opiates	.640	.604
Inhalants	.622	.595
Smoking	.709	.684
Alcohol	.762	.746

TABLE 120.

Multiple regression coefficients and correlations for the top 20 predictors of Marijuana Use (Total Coronado School Sample 1969).

Predictor	Regression Coefficient	Correlation
Risk from minor stealing	-.032784	-.334
Risk from sniffing glue (inhalants)	.029978	-.361
Risk from use of pills or speed	-.025500	-.579
Risk from smoking cigars or pipes	-.038179	-.427
Risk from drinking beer or wine	.061176	-.294
Risk from homosexual acts	.023603	-.062
Risk from smoking marijuana	-.092623	-.652
Risk from stealing purses and cars	.052297	-.199
Risk from use of LSD	-.075300	-.562
Gain from smoking cigarettes	-.029238	.002
Gain from driving a car	-.020463	-.159
Gain from stealing small things	-.084000	-.143
Gain from abortion	.051069	.084
Gain from sniffing glue (inhalants)	-.055218	.101
Gain from smoking marijuana	.071145	.460
Gain from stealing purses and cars	.070535	.054
Gain from two-person fighting	-.018306	-.072
Alternatives to smoking	-.021404	-.380
Alternatives to drugs	-.011856	-.361
Alternatives to cheating	.029794	-.105

TABLE 121.

Multiple regression coefficients and correlations for the top 20 predictor of LSD Use (Total Coronado School Sample 1969).

Predictor	Regression Coefficient	Correlation
Risk from stealing small things	.023381	-.163
Risk from sniffing glue (inhalants)	-.023656	-.298
Risk from smoking cigars or pipes	-.019695	-.195
Risk from drinking beer or wine	.039774	-.093
Risk from gang fighting	-.020963	-.170
Risk from teen-age marriage	.020984	-.107
Risk from using heroin	-.033880	-.405
Risk from using LSD	-.051269	-.485
Gain from driving a car	-.020631	-.163
Gain From stealing small things	-.036293	.020
Gain from sniffing glue (inhalants)	-.072047	.081
Gain from use of pills or speed	-.030411	.181
Gain from smoking cigars or pipes	.024187	.139
Gain from using hard liquor	.030887	.154
Gain from gang fighting	-.028233	-.002
Gain from stealing purses and cars	.053009	.130
Gain from two-person fighting	-.030819	-.025
Gain from use of heroin	.037575	.307
Gain from use of LSD	.046721	.368
Alternatives to drag racing	-.005076	-.169

TABLE 122.

Multiple regression coefficients and correlations for the top 20 predictors of Pep Pills or "Speed" Use (Amphetamines and Barbiturates) from the Total Coronado School Sample 1969.

Predictor	Regression Coefficient	Correlation
Risk of drag racing	.023868	-.171
Risk from use of pills or "speed"	-.090642	-.599
Risk from drinking beer or wine	.028375	-.258
Risk from riding a motorcycle	-.053974	-.133
Risk from sexual intercourse	-.029056	-.330
Risk from gang fighting	-.032763	-.252
Risk from homosexual acts	.030318	-.108
Risk from cheating	.017264	-.262
Risk from stealing purses and cars	-.033729	-.338
Risk from two-person fighting	.037435	-.077
Risk from use of LSD	-.045730	-.545
Gain from stealing small things	-.087222	-.010
Gain from sniffing glue (inhalants)	-.049552	.186
Gain from use of pills or "speed"	.034729	.363
Gain from smoking cigars or pipes	.047855	.210
Gain from playing football (rough sports)	-.016706	-.195
Gain from stealing purses or cars	.053481	.164
Gain from use of LSD	.027646	.380
Alternatives to sexual intercourse	.018223	-.169
Alternatives to illegal drugs and "pot"	-.007994	-.313

TABLE 123.

Multiple regression coefficients and correlations for the top 20 predictors of Barbiturates Use from the Total Coronado School Sample 1969.

Predictor	Regression Coefficient	Correlation
Risk of driving a car	-.023968	-.083
Risk from use of pills or "speed"	-.041126	-.494
Risk from drinking beer and wine	.036891	-.181
Risk from demonstrating and protesting	.035445	-.159
Risk from smoking marijuana	-.027905	-.487
Risk from cheating	-.012981	-.245
Risk from mainlining - injecting drugs	-.035748	-.465
Gain from smoking cigarettes	.045426	.253
Gain from driving a car	-.024647	-.077
Gain from moving	-.015044	-.164
Gain from sniffing glue (inhalants)	-.058892	.203
Gain from drag racing	-.033082	-.038
Gain from drinking beer or wine	.018203	.252
Gain from riding a motorcycle	.022936	-.015
Gain from gang fighting	-.039182	.073
Gain from teen-age marriage	.037460	.230
Gain from mainlining - injecting drugs	.073975	.439
Alternatives to sex	-.007811	-.221
Alternatives to smoking	-.017162	-.310
Alternatives to cheating	.017094	-.152

TABLE 124.

Multiple regression coefficients and correlations for the top 20 predictors of Opiate Use from the Total Coronado School Sample 1969.

Predictor	Regression Coefficient	Correlation
Risk of smoking cigarettes	-.029685	-.198
Risk of stealing small things	.046018	-.060
Risk from sniffing glue (inhalants)	-.039192	-.216
Risk from drinking beer and wine	.020822	-.033
Risk from playing football (rough sports)	.029301	.126
Risk from stealing purses and cars	-.039470	-.159
Risk from using heroin	-.051967	-.270
Risk from mainlining - injecting drugs	.031722	-.191
Risk from use of LSD	.023256	-.164
Gain from sniffing glue (inhalants)	-.094681	-.007
Gain from drag racing	-.022210	-.062
Gain from sexual intercourse	.013175	.127
Gain from drinking hard liquor	.028329	.153
Gain from gang fighting	-.019432	.063
Gain from teen-age marriage	.024108	.163
Gain from smoking marijuana	-.034931	.141
Gain from stealing purses and cars	.040461	.153
Gain from two-person fighting	-.030398	.043
Gain from mainlining - injecting drugs	.062707	.273
Gain from using LSD	.028047	.258

TABLE 125.

Multiple regression coefficients and correlations for the top 20 predictors of Tobacco ("Smoking") Use from the Total Coronado School Sample 1969.

Predictor	Regression Coefficient	Correlation
Risk from moving	.067842	.122
Risk from use of pills or "speed"	.047203	-.403
Risk from smoking cigars or pipes	-.106824	-.466
Risk from drinking beer and wine	.043920	-.377
Risk from sexual intercourse	.023738	-.330
Risk from gang fighting	-.063032	-.293
Risk from smoking marijuana	-.061995	-.484
Risk of two-person fighting	.033014	-.192
Risk of using heroin	-.049138	-.298
Gain from using cigarettes	.059923	.135
Gain from driving a car	-.069477	-.077
Gain from stealing small things	-.102838	-.068
Gain from protesting	.036358	.219
Gain from sexual intercourse	.049986	.322
Gain from drinking hard liquor	.055796	.249
Gain from marriage	.025387	.120
Gain from mainlining - injecting drugs	-.076985	.084
Alternatives to smoking	-.031439	-.378
Alternatives to drag racing	.027905	-.159
Alternatives to sex	-.014898	-.277

TABLE 126.

Multiple regression coefficients and correlations for the top 20 predictors of Inhalants Use from the Total Coronado School Sample 1969.

Predictor	Regression Coefficient	Correlation
Risk from stealing small things	-.026432	-.316
Risk from sniffing glue (inhalants)	-.024250	-.342
Risk from smoking cigars and pipes	.027086	-.163
Risk from sexual intercourse	-.025731	-.255
Risk from gang fighting	-.031251	-.348
Risk from homosexual acts	.032127	-.125
Risk from two-person fighting	-.016034	-.295
Gain from smoking cigarettes	.041867	.181
Gain from driving cars	-.028493	-.078
Gain from sniffing glue (inhalants)	.033193	.227
Gain from drag racing	-.039977	-.017
Gain from smoking cigars	-.026100	.127
Gain from protesting and demonstrating	.015556	.139
Gain from motorcycle riding	.030859	.074
Gain from marriage	.016259	.121
Gain from smoking marijuana	-.032727	.173
Gain from using heroin	.090952	.261
Gain from mainlining - injecting drugs	-.095545	.151
Gain from using LSD	.030356	.221
Alternatives to smoking	-.010543	-.285

TABLE 127.

Multiple regression coefficients and correlations for the top 20 predictors of Alcohol Use from the Total Coronado School Sample 1969.

Predictor	Regression Coefficient	Correlation
Risk from smoking cigarettes	-.068050	-.503
Risk from sniffing glue (inhalants)	.036034	-.335
Risk from drag racing	.035454	-.157
Risk from use of pills or "speed"	-.044574	-.474
Risk from drinking beer and wine	-.062467	-.508
Risk from protesting and demonstrating	.024901	-.343
Risk from homosexual acts	.030226	-.050
Risk from smoking marijuana	-.057650	-.553
Gain from smoking cigars and pipes	.053707	.131
Gain from driving a car	-.040748	-.029
Gain from having an abortion	.051468	.045
Gain from sniffing inhalants	-.077587	.077
Gain from smoking cigars and pipes	-.092067	.081
Gain from drinking beer and wine	.099146	.358
Gain from sexual intercourse	.058813	.373
Gain from homosexual acts	-.047266	-.075
Gain from use of heroin	.053157	.150
Gain from mainlining - injecting drugs	-.021417	.142
Alternatives to smoking	-.012998	-.333
Alternatives to cheating	.017407	-.094

Each score a person has is multiplied (weighted, or loaded) by the appropriate regression coefficient and then the products are summed over all scores to yield a predicted drug use score (see McNemar, 1949, for a clear explanation of multiple regression at a simplified level). As can be seen in Tables 120 to 127 the variables that give high predictions of drug use tend to be those with high loadings on the F-1 or "Sex-Pot" factor (see Tables 31 to 62 for a listing of the factors) and the computation of the factor score on the F-1 factor for each person should give very similar predictions. The multiple regression approach was used here because it yields a drug use score which is expressed directly as a category of probable drug use and is therefore easier to understand. For example, if a person receives a score near zero or below it would indicate that the prediction for this person is that he is and will continue to be a non-user. A score near 1.0 would indicate an infrequent user and scores around 2.0 or higher would predict the person either is or has a high chance of becoming a regular user.

Distributions of Predicted Scores: In Figures 50 to 52 the distribution of predicted scores for each actual category of drug use is shown. The range of predicted scores has been arbitrarily divided into tenths and the frequency of non-users, infrequent or regular users falling at their mean in each tenth is shown. This procedure makes it possible to see the way the predicted scores for each degree of drug use are distributed.

The predicted scores make it possible to ask what percentage of the non-user group has a high probability of becoming users. It

FIGURE 50

Predicted Scores for Marijuana Use and Actual Use
Total Coronado School Samples - 1969

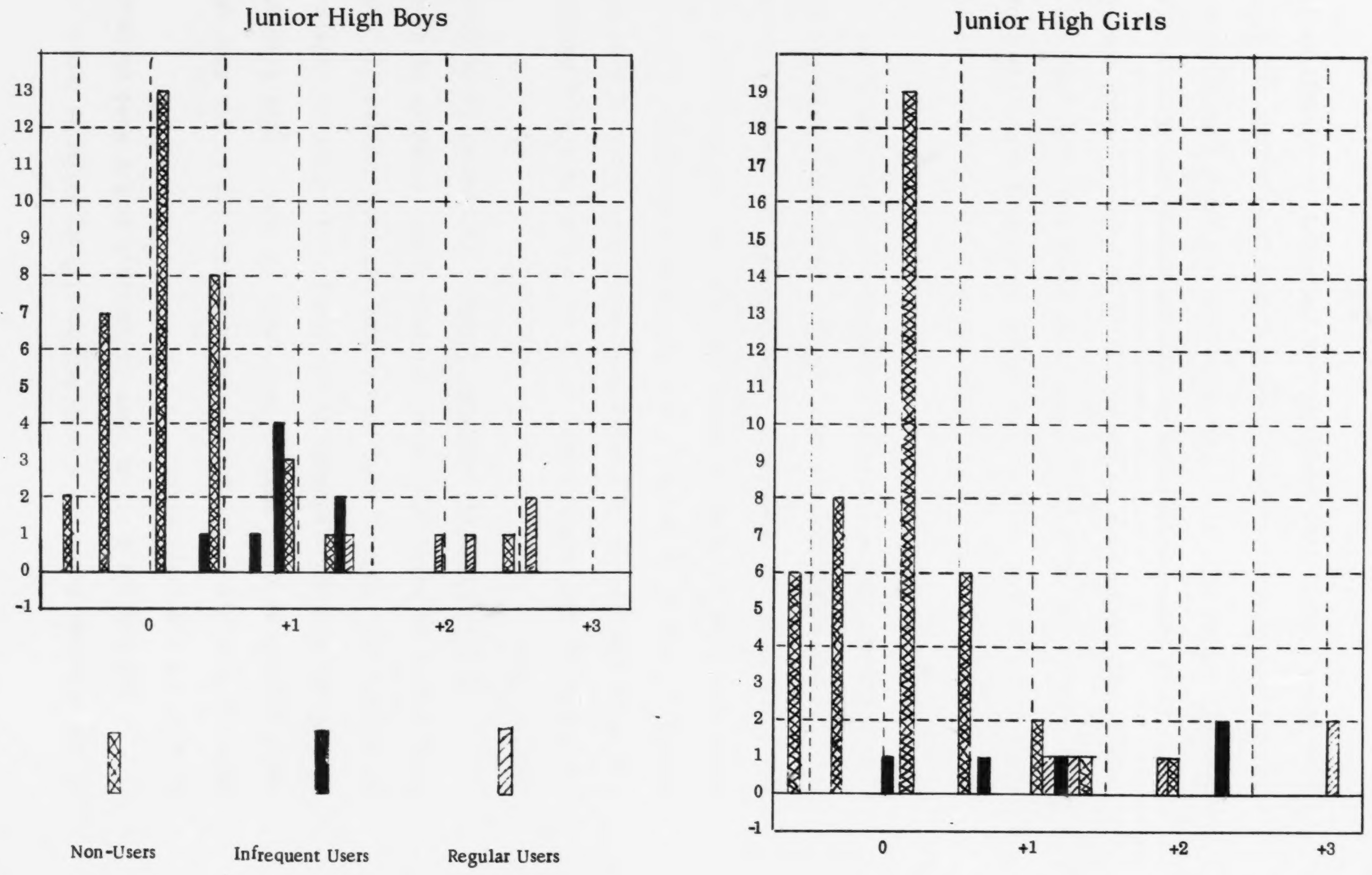
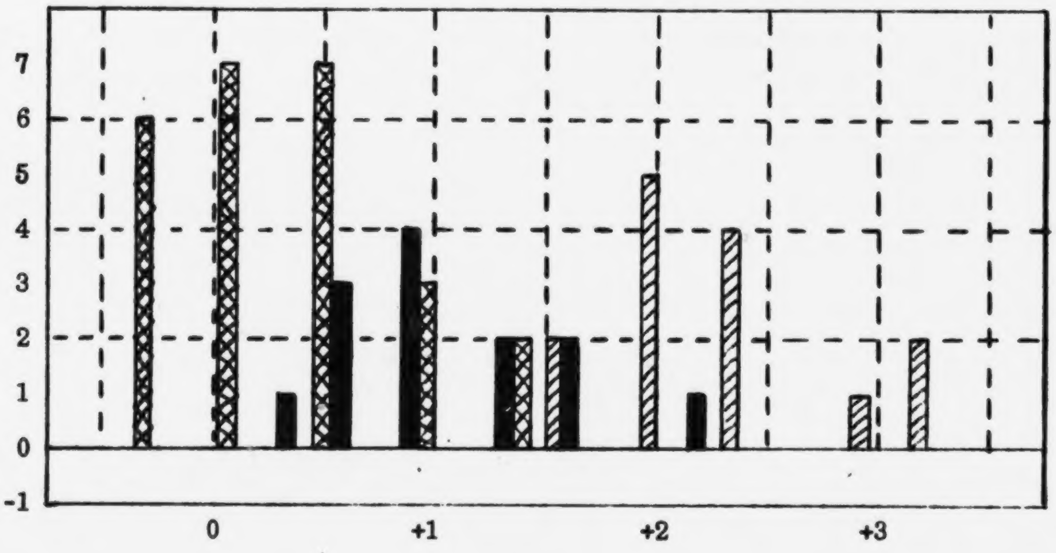


FIGURE 50
- continued -

Predicted Scores for Marijuana and Actual Use
Total Coronado School Samples - 1969

Senior High Boys



Senior High Girls

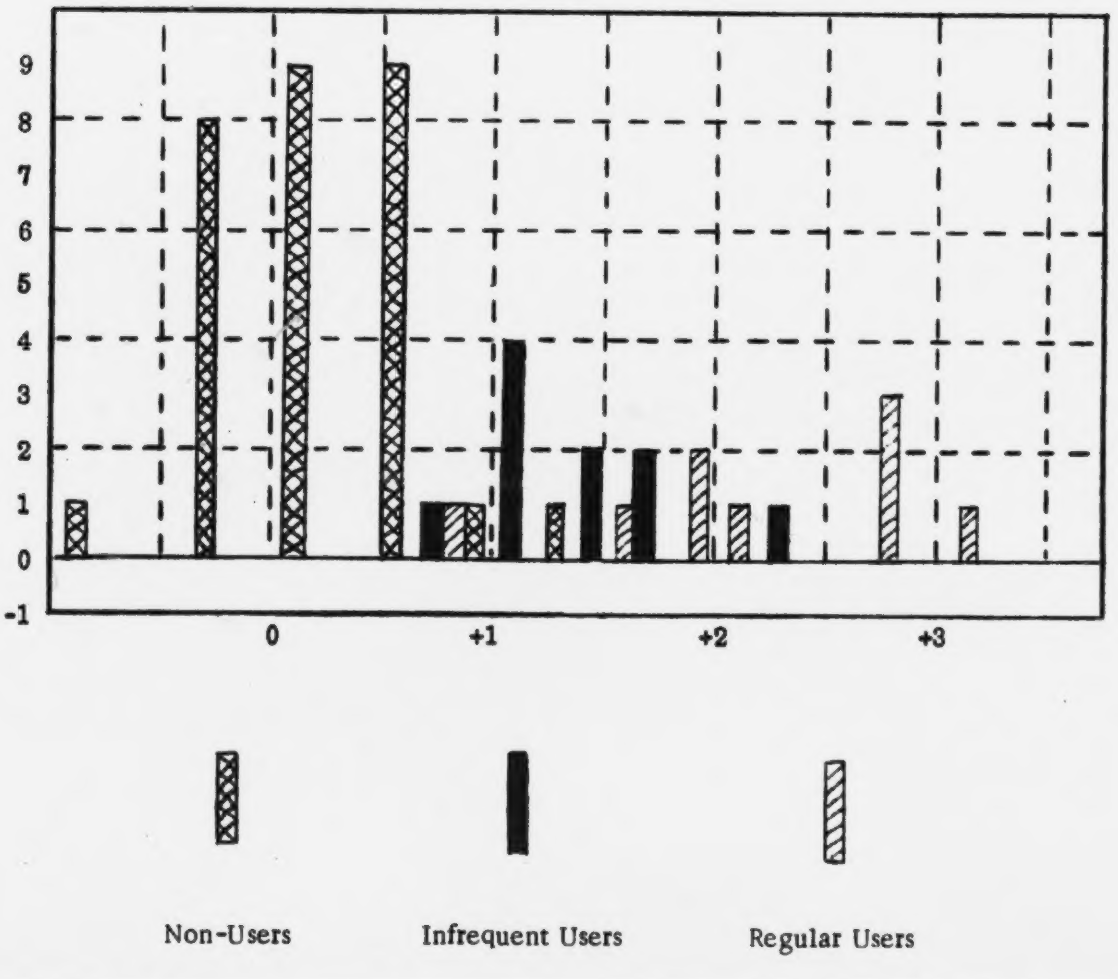
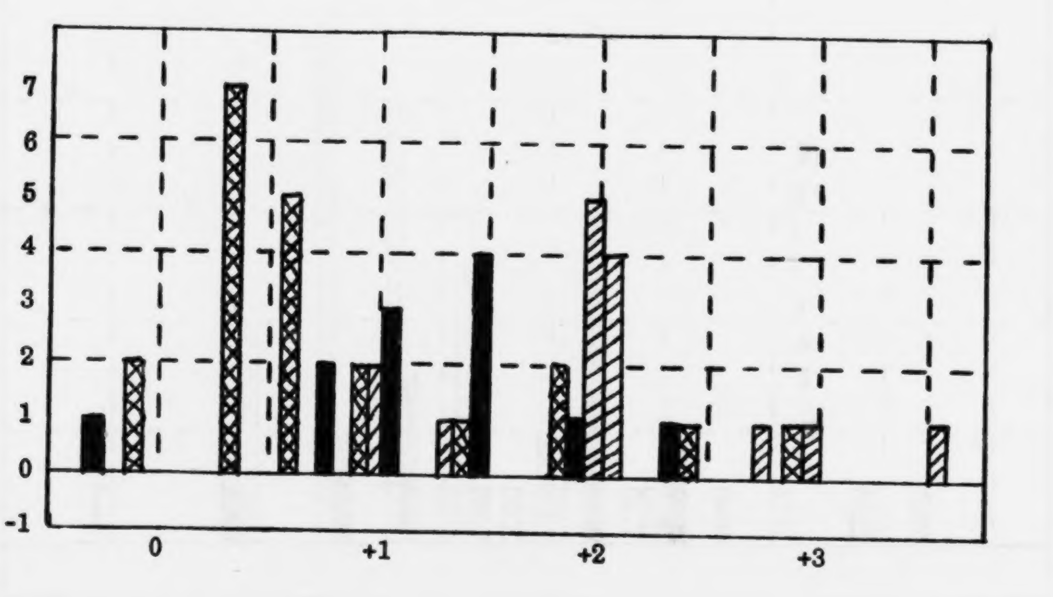


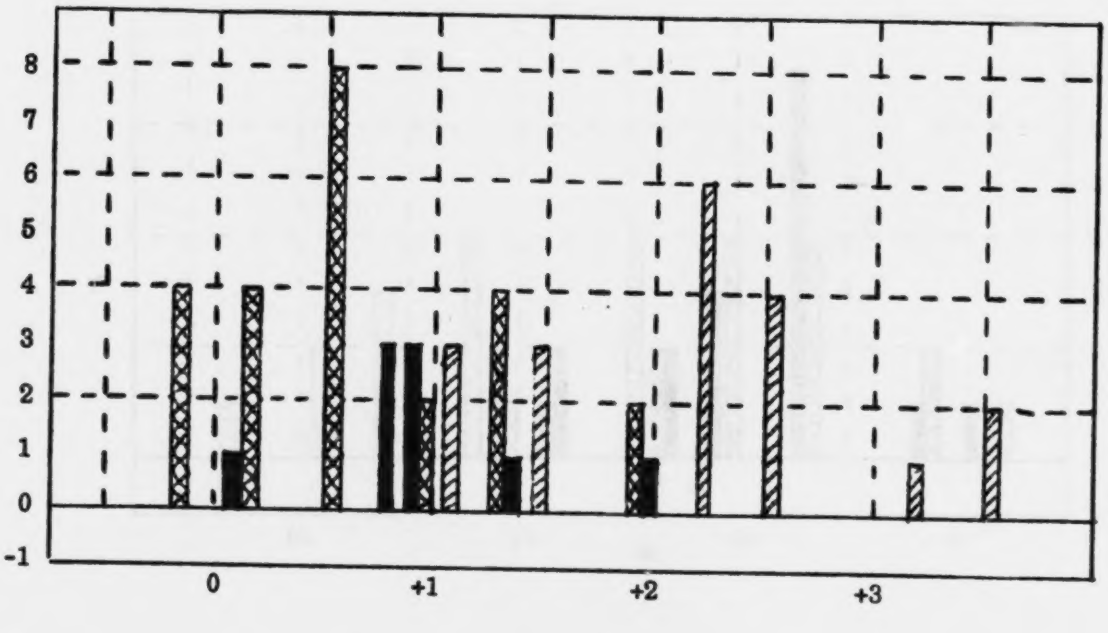
FIGURE 51

Predicted Scores for Tobacco Use and Actual Use
Total Coronado School Samples - 1969

Junior High Boys



Junior High Girls



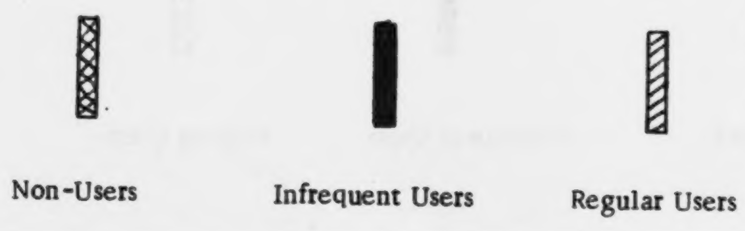
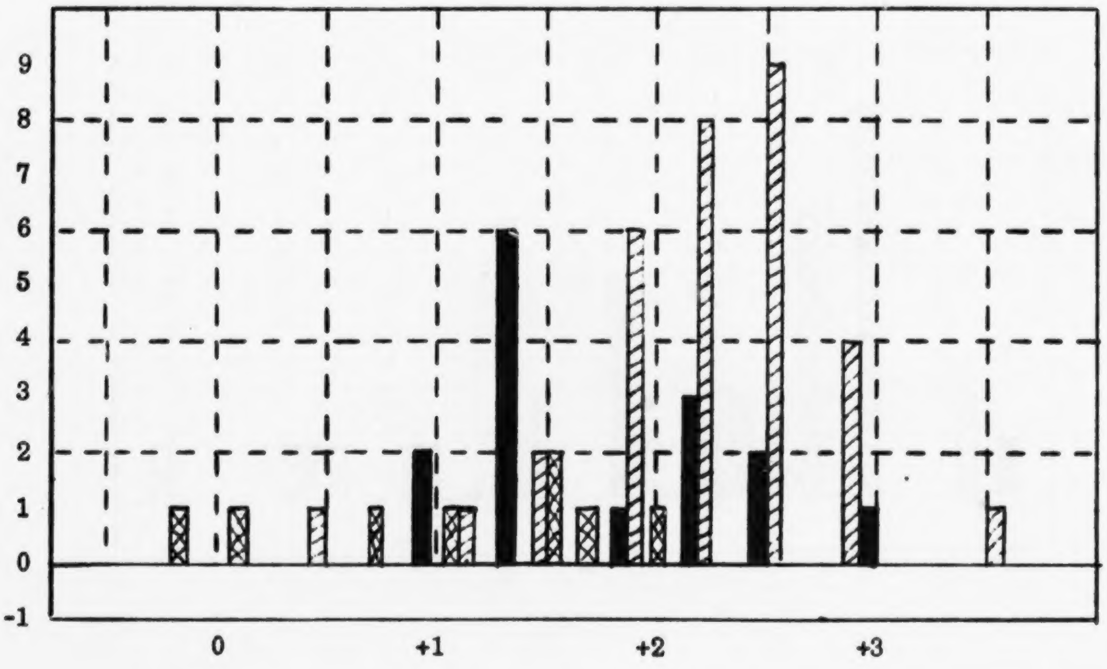


FIGURE 51
- continued-

Predicted Scores for Tobacco Use and Actual Use
Total Coronado School Samples - 1969

Senior High Boys



Senior High Girls

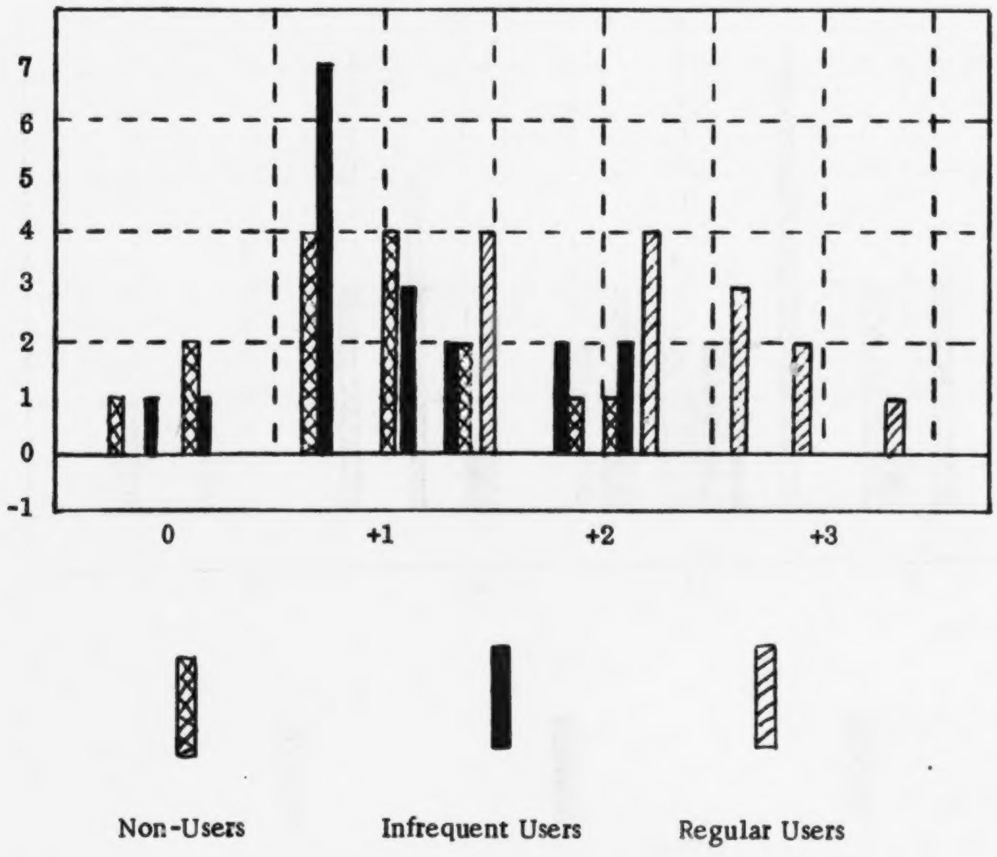
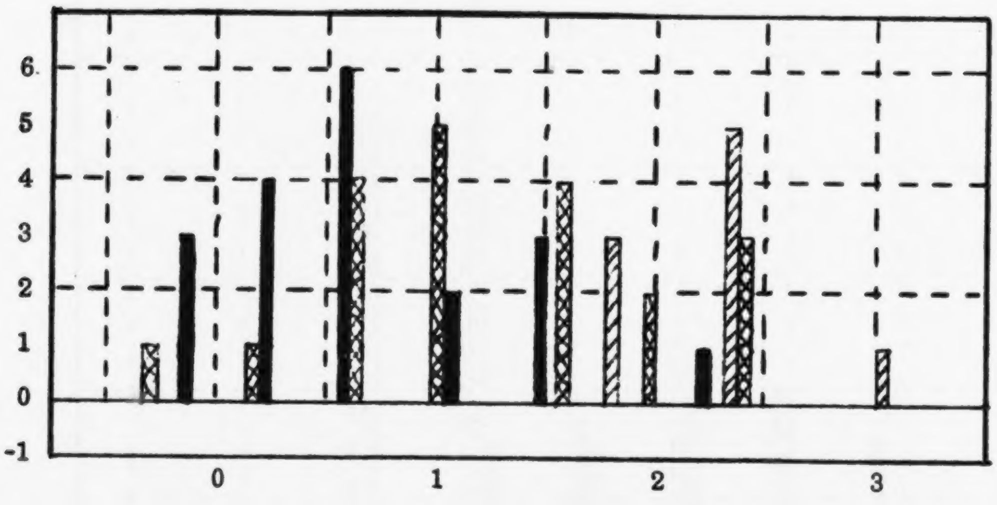


FIGURE 52

Predicted Scores for Alcohol Use and Actual Use
Total Coronado School Samples - 1969

Junior High Boys



Junior High Girls

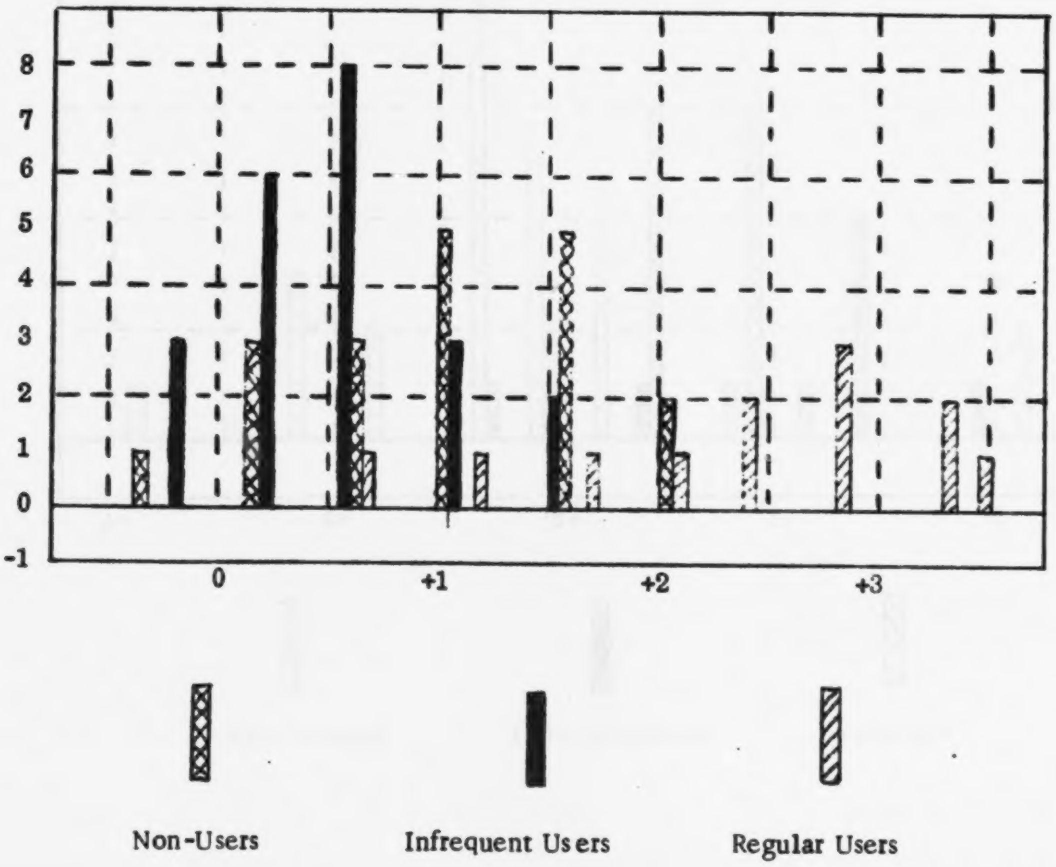
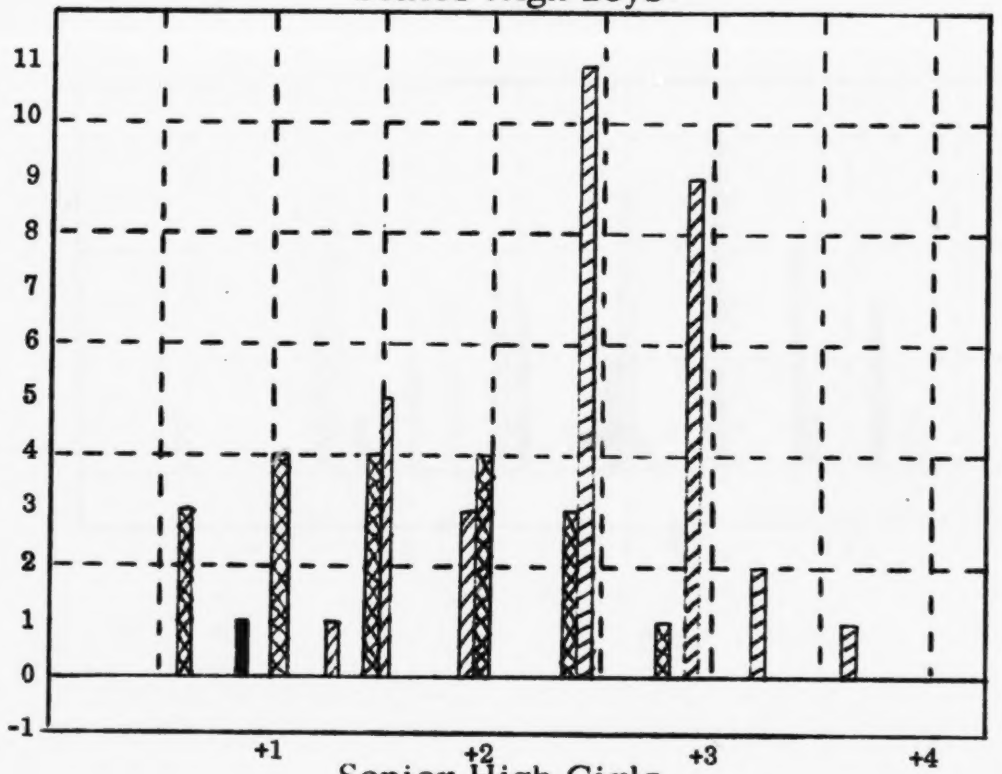


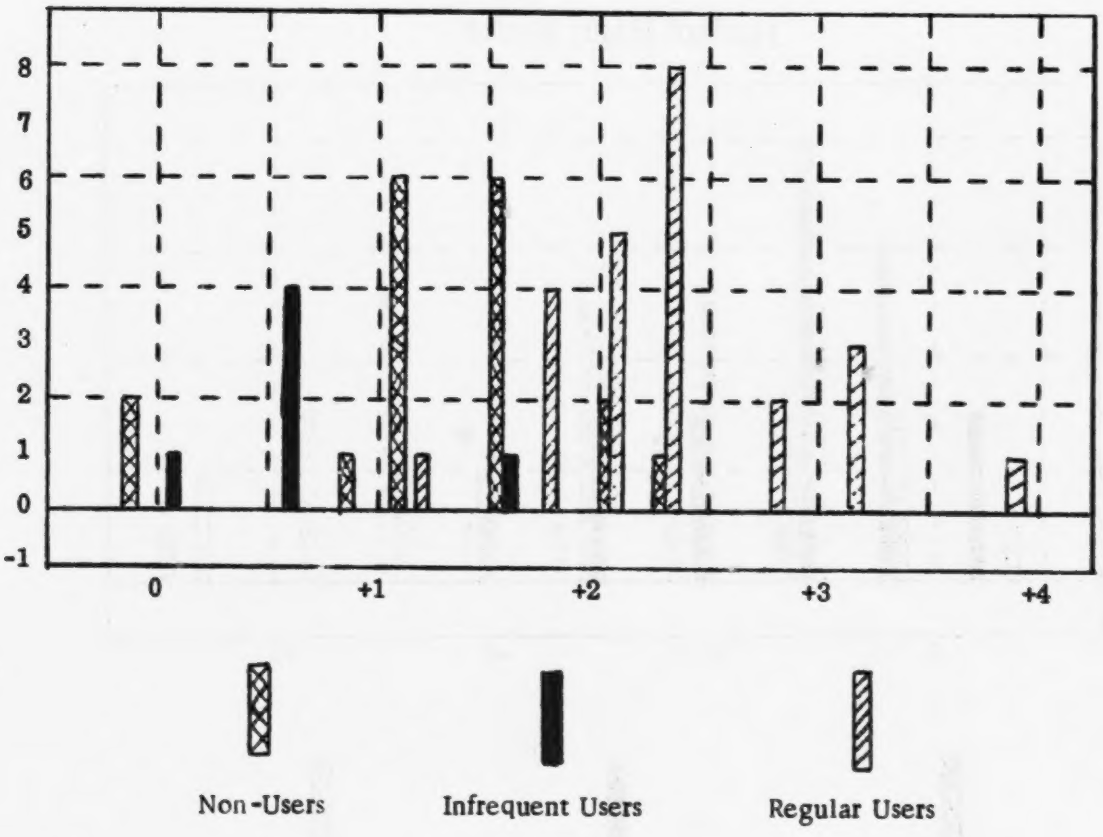
FIGURE 52
-continued-

Predicted Scores for Alcohol Use and Actual Use
Total Coronado School Samples - 1969

Senior High Boys



Senior High Girls



is also possible to ask what percentage of regular users has a good chance of becoming infrequent or non-users. For example in Figure 50 the junior high boys have 35 non-users of marijuana. Of this group of non-users, 13 have predicted scores of .4 or higher, or 37.2% of the group. A correlation of .825 (which is the multiple r for the entire school sample, see Table 118) leaves a probable misclassification of 32% or about 1/3. This means we can postulate that approximately 2/3 of 37% of the non-users will become at least infrequent users. The junior high boys have 27.5% of their number who have already used marijuana at least once. If we add to this 27.5% 24% of the non-use group (2/3 of 37%) we obtain a prediction that by high school about 51.5% of the boys will have tried marijuana. The actual percentage in the high school group is 51.9%, a very close agreement with prediction.

To carry the process a step further, the senior high boys have about 40% of the non-user group with predicted scores of .5 or higher. Taking 27% (2/3 of 40%) and adding this to the boys who have already tried marijuana, we arrive at a value of 79% for the eventual percentage of males who will try marijuana. Table 104 shows that 62.5% of the males in the college sample have at least tried marijuana and this is a highly selected group. Considering the large percentage of non-college youth as well as the years yet remaining for the college males, the 79% predicted value does not seem unreasonable.

B. PREDICTION OF BEHAVIOR (COLLEGE SAMPLE-SEPTEMBER 1969)

On the basis of the results from the school groups, sample multiple regression calculations were done on the college group. The risk and the gain of thrill or pleasure ratings for each behavior were used in the equations.

Use of Marijuana: The multiple r for the males was .764 and for the females .548. It should be noted that these values were obtained from two single ratings rather than from scores based on the sum of several ratings. These results are quite comparable to those found in the school data.

Sexual Behavior: Can the present approach be used for predicting behavior other than drug use? Sexual behavior was selected in order to answer this question. Again, the risk and the gain of pleasure ratings were used. The multiple r for males was .522 and for females .473.

The ratings used for these calculations were not selected to give the highest possible outcomes, but on the basis of the school results. It seems safe to assume that a multiple r at least this large is readily obtainable for college students and that optimum selection of several cross-validated predictors for specific subsamples could raise the values considerably.

C. PREDICTION OF BEHAVIOR (ADULT SAMPLE, CORONADO 1969)

One sample of highly selected "anti-drug" adults was available that had provided demographic information. Unfortunately, due to a very large amount of data, this sample did not have a complete correlation matrix computed so that multiple correlations were not possible. Reported drug use for this adult sample was also quite low. However, there was relatively frequent use of alcohol reported and this behavior was compared to its risk and gain of pleasure ratings. The males had a correlation of -.150 with risk and .401 with gain of pleasure and alcohol use. The corresponding correlations for the females were -.300 and .472. Those of both sexes who drank more also tended to expect little effectiveness from psychotherapy as a control for any type of behavior (correlations averaged -.350). Multiple regression on this adult data, using the same measures as in the school sample should give predictions of comparable accuracy. It is also interesting to note that this adult sample continues the trend seen in the college group -- risk seems to become less relevant than gain with increasing age.

Part VII

An Overview and Recommendations for Action

Potentials and Problems for the Future

By this point it should be clear that the risk-taking approach has much to offer in the study of drug abuse. The RTAQs have proven to be reliable, to have interesting factor structure and to relate highly to actual drug use and other behaviors. Information from the RTAQ can be used to predict present and future drug use in individuals and groups and it can be used to both construct and evaluate the effects on action programs. What more could we want?

For one thing, it is well to pause again at this point and emphasize the exploratory nature of the present research. The samples are limited and there is great need for cross-validation of the present results with more extensive data. A major need is to study younger children at the level of the 3-4th grade and to either do cross sectional studies at every higher grade or to follow a single group longitudinally through the entire school process or both -- preferably both.

Representative samples of pupils, teachers, parents, officials, and the general public will be needed from the entire Coronado school district. Of course it would be better to do this in at least one other San Diego area district, better yet statewide or even nationally.

Action programs must yet be designed, in part, on the basis of RTAQ data. To evaluate such programs a baseline will have to be established initially and periodic reassessments done throughout the programs.

Actual behavior records are needed for individuals (grades, discipline problems, success or failure at extracurricular activities, arrests, direct observations of drug use, etc.) and groups against which to validate predictions made by the RTAQ. There is no reason to doubt the accuracy of the reported frequencies of behavior on the RTAQ, but it is always a comforting feeling to get data closer to real behavior.

The earlier remarks about vulnerability of the RTAQ to misuse need to be repeated here. There is a strong probability that the present results could not be repeated in a context where there was less trust and cooperation. Herbert Brayer has prepared the school and community to accept the author and the validity of direct research into the problem of drug abuse. This was no easy task. If suspicion and hostility toward the intent of the RTAQ were present, results might be quite useless. On the other hand, they might not. This problem also needs investigation. There are a few more things we could want!

GENERAL APPROACHES TO BEHAVIOR CHANGE

The present results sprang from a general theory of decision making which was discussed in the opening sections of the report (see page 3). Attention is now directed specifically to general applications in drug abuse programs. How shall we view drug abuse and what are the options available for its control?

Drug abuse is part of a general pattern of values and behavior, not an isolated phenomena. We have seen that drug use tends to be generalized and that it relates to behaviors such as sex and theft. Why on earth would a young person choose to use a dangerous drug? Let me quote at some length from an earlier writing about cigarette use (Carney, 1968b). Substitute "drugs" every time you see "cigarettes" and "any motive" every time you see "achievement motive."

> "Let me close with a concrete illustration of how these rather abstract notions might be applied to a prototype young person, call him Jake. Jake has had a history of less than average success in school and in his general social competition with siblings and peers. This gives him a solid basis for being generally anxious about failure. Jake's parents have rather consistantly pushed him to prove himself worthy of love and attention. They reward him when he does well and withhold love when he fails. This gives him an anxiety-loaded need for achievement. For Jake the ordinary outlets provided by school and home evoke a strongly driven approach-avoidance conflict due to his desire to both achieve and avoid failure. Jake is just reaching physical manhood and he is in the crisis of proving himself to be a worthy, independent, manly person."
>
> "Jake's situation is such that he strongly needs alternate behaviors which will give him the symbol if not the reality of manhood and competence. What sort of goals will these substitutes be? They will be outside of his direct experience of competition so that conditioned avoidance tendencies will be minimal. They will also ask of him no behaviors except those which are well within his level of skill so that expectancy of success is high. And finally, these substitute goals should be labeled by respected authoritative sources as being representative of the sort of thing done by achieving adults. That is, the incentive values will be symbolically high due to the risk attributed to the goal and the mastery of this risk by the model adults."

"Such substitutes have everything going for them. They have high SEU due to the combination of a high level of achievement motivation, high achievement drive due to repeated drustration of the motive and the high incentive value of the goal. In addition aroused behavior is high since the actual amount of expectancy of success is high. The person can actually engage in these reputedly risky activities without the necessity to learn new skills or to expose himself to anything that in his direct experience has resulted in danger or failure. Thus the level of aroused fear of failure is low. Others may claim difficulty and danger for the behaviors but the goals are close at hand and seem easy to the individual. In this manner the level of avoidance is low and the level of approach is high."

"Can you think of a few such substitute goals which might be available to Jake? How hard is a cigarette to get? What talent does it take to smoke one? Never-the-less the tobacco advertising, parents and the law assure Jake that smoking is reserved for adults--especially hairy-chested achieving types. In fact, Jake finds that respected adults do smoke and seem in no immediate danger. A similar analysis could be done for alcohol and drugs."

"The automobile is another example. Only the least coordinated and intelligent have difficulty driving on our modern highways at a high rate of speed. While driving one has a direct sense of mastery and control over great forces and can constantly test his skill against the problems of the road. To Jake the automobile probably represents the ultimate in adult success, and, of course the best adults smoke, drink scotch and drive the raciest cars. Jake is at the height of his physical coordination skills and has had ample success at driving. No one is about to inform Jake of the dangers of drag racing and "chicken" who has directly experienced these dangers--these people are conveniently dead or hospitalized. So, with the automobile actual ease of access and operation is coupled with high symbolic risky achievement."

"Other examples such as sex come easily to mind. In all of the cases noted Jake may be engaging in behaviors where the objective risks are high, but the reality of this risk is not borne out in Jake's direct experience. He sees these behaviors as the safest, most direct route to the satisfaction of his motives. He can do the requisite instrumental behaviors and can engage in consummatory acts which are both symbolically and directly rewarding without seeming to run any real immediate risk. This is one of those fine times when you can have your cake and eat it too. When the danger of cake eating does become obvious Jake will probably be dead, dying, facing emanent fatherhood or in

> jail. He then becomes one of those rejected models who has failed and the younger generation turns to those more numerous and obvious adults who are still about busily munching cake."

For drug use the models are tobacco and alcohol use by adults in a society that pushes these drugs with every available means. The question arises, "What convincing alternatives have we to offer against the use of marijuana and other "undesirable" drugs when our society condones the use of nearly every drug under some condition?"

I am going to limit my discussion to marijuana since it is the most aggravating problem at the moment. The data on marijuana use and attitudes suggest that at the junior high school level the major gains sought by drug users are "making friends" and "gaining adult feelings." ("To this we can also add from the vast Title III project's "clinical data" bank "lack of self-respect," "boredom," "lack of affection" and "well being.") Why select marijuana to do this? The accumulated data show that youth perceive marijuana to have moderate risk and relatively high gain--a perfect choice for a motive satisfying behavior. Marijuana has the additional ingredient of being strongly opposed by "square" adults and this makes marijuana useful for "hanging loose" and rebelling (Schuman, 1969). Finally, marijuana does produce the tension release and the "turn off" of problems that alcohol does without many of the side effects of alcohol. Marijuana, in short, does "feel good" to those who need tension release and such use can become a strongly self-reinforcing "pleasuse" just as can use of tobacco and alcohol. Older or more experienced users of marijuana do, in fact, report a shift in emphasis from external goals toward internal "pleasure gain."

Marijuana users also tend to see less gain in the "square" areas of obtaining "achievement" and "status" such as from football and other

F-2 "Masculine-Aggressive" behaviors. There may well be a developmental sequence which goes along the following lines. Behaviors such as sports and cheating occur very early in the sequence of behaviors, prior to use of even alcohol and tobacco. An early experience with such behaviors may help to form a view of the riskiness of many other areas of behavior, including drug use.

As success and failure occur behaviors which are directly competitive and problem-solving in a socially approved manner become perceived as more or less risky. Failure to find satisfaction in direct aggressive competition can lead to less approved methods of "getting ahead" such as cheating and stealing. Such behaviors in turn can lead to anxiety and guilt feelings which can be soothed (or coped with) somewhat by drug use. Another possible pattern would be to simply see no point in competing for goals such as "grades and material success," yet being forced to do so by parents and the school. Cheating and theft will also be attractive in such a case as ways to attain "success" without making what seems to be a pointless effort. Drugs also offer a temporary escape from such conflicts.

The present data does not offer clear-cut evidence for or against the above possibilities. It does, however, suggest that the drug problem will have to be considered in a larger contest of many behaviors and patterns of reward and punishment before any real success at education and control can be expected.

Returning to marijuana use, how could action programs be constructed to limit its use? The most tempting approach to many has been to "get tough," pass strong laws and force police action. This approach requires very little thought, allows the person advocating it to feel sublimely self-rightous, and on the side of "goodness" against "evil." It also permits a disavowal of personal parent and citizen responsibility and the shifting of the burden of enforcement to the hapless police and the equally frustrated courts and penal authorities.

Yet, "toughness" has already proven an ineffectual drug abuse control method. There are several reasons for this. The major one is that what you are trying to do is to increase a perception of risk without effective means for doing so; to "treat" a symptom rather than its causes.

The history of prohibition and general attempts to control drugs by legal means clearly shows that it is a most difficult and frustrating thing to do. Many more police, judges and jails are required than society is willing to financially afford. When large numbers of people engage in the behavior, enforcement becomes highly uneven, unfair and even corrupt. Only those individuals who have no means of defense, or who are stupid, or who are already the targets of police surveillance tend to get punished by actual arrest, imprisonment or other penalties. Even clearly demonstrated physiological and psychological damage to the individual--or fear of legal penalties--have historically not stopped children or adults from using tobacco and alcohol (and now the same can also be readily said for abuse of most drugs).

There *are* ways to increase the perception of risk which might work, as when LSD was scientifically connected with possible genetic damage. When the medical reports were publicized, the use of LSD dropped off dramatically. Marijuana is certainly not a harmless drug, but there is no convincing evidence that it is more *physically* harmful than tobacco or alcohol. What honest way can we take to increase its perceived risk to a high enough level? Dishonest propaganda (media or teaching) methods simply destroy our credibility. The most we can now hope for is recognition of moderate risk (danger to the individual now as well as in the future) and that is what we have!

The more profitable area to work in would be "gain." If we can produce less perception of "gain" from marijuana relative to other behaviors (equally or more satisfying alternatives) there seem to be a chance.

Research indicates that much of the "effect" of marijuana may be due to suggestion. It is possible to spread the word that "pot is a put-on." Another approach is to ask where does marijuana use lead you? Raynor (1969) shows that a behavior is more strongly motivated if it is seen as a necessary step in a sequence of choices which lead to a goal. We must be wary of scare tactics such as "Pot Leads to H." There is, again, no "good" evidence that this is so. We can help the student to evaluate his goals, and to ask himself, "Will marijuana lead me there or is it a dead end?" A convincing case can be made that all marijuana use can get you in the long run is a strong but only mildly pleasant habit.

The most effective way to avoid marijuana use would be to anticipate its attraction and to provide alternate behaviors with less risk and higher gains. In other words the RTAQ can help predict a potential user but then something tangible must be provided to circumvent the eventuality.

When a child is in school, for example, he must find personal successes and rewards in his studies. This is exceptionally difficult to do under current conditions, but given trained and dedicated teachers with resources and facilities schools can come close to this goal.

Each child must have some area of approved social behavior at which he can develop self respect and win personal status. Football, grades on a curve, and other highly competitive activities almost automatically exclude a large portion of children. Again, we must devise tools and strategies so that each child can experience enjoyment as well as success. Such programs are not without expense--materials, in-service training, etc., but it will more than pay back every dime invested by reducing costs of police, courts, penal institutions, and hospitals, and by increasing tax revenues. "Self actualized" people pay off society so well that the development of such people is the single "best" investment any society can make.

What do we now provide as satisfying ways of reaching adulthood at the physiological time of maturity? Nearly every avenue to prestige and self reliance is closed. The 14 year old can't participate in politics or major decisions concerning social control over his immediate behavior. He can't smoke or drink or make love legally. He can't even have a meaningful job. What are the challenging, zestful opportunities for exploration and adventure? Where can he test his growing skills against the world without being exploited? There are things we could easily do to increase the opportunities in all of these areas.

Perhaps the most effective means to decrease the expectancies of gain would be to stop advertising the gains. Our young are saturated with promises of gains from drugs almost from birth. Watch the TV for a few hours and keep track of the messages which say, "escape your problems, be successful, be loveable, be in" by using one sort of drug or another.

Mother and father use drugs and seem to enjoy them. Alcohol is a "means to social interaction and success." Even the family doctor prescribes a tranquilizer when he is unable to find any effective means for solving a patient's problem. "We can't lick it," he says, "but at least we don't have to worry about it."

The young read these messages loud and clear, then proceed to act on them. What other behavior could you expect under such conditions? Until we, as a society, stop creating high expected gains from drugs we can be certain that our young people will abuse drugs--just as they have been taught and even urged (tobacco, alcohol, drug advertisements in almost all media) to do.

SOME SPECIFIC SUGGESTIONS

Adults tend to see large risks for the young in behaviors that are "adult" such as "marriage" and "driving." Can we not let our children have clearer, more meaningful and earlier paths to adult status? We could provide apprentice type jobs in school and industry at the earliest possible age and pay for the work. Real responsibility for decision-making in the schools could be shared. Wider opportunities for non-exploitational (and tensionless; noncompetitive) recreational and social activities could be provided. And so on.

Better examples can be given by curtailing the advertisement of dangerous drugs such as tobacco and alcohol. Family, group and school counseling services could be expanded to provide a chance to work through problems before they build to an intolerable high intensity.

In our curricula on drugs to be taught in the schools we must recognize the differences in motivation between sex and age groups.

Girls maturing more rapidly than equivalent age boys, tend to be trying to make friends and to form adult love relationships. Boys even before puberty, tend to be proving their manhood and striving for achievement. If at all possible we should show that drug use is not instrumental to any of these goals, while, at the same time, pointing out pleasurable, profitable and satisfying alternatives. These steps are particularly important at the youngest ages.

The RTAQ can provide a basis for discovering what the expected gains and risks are and for then comparing theseexpectations to realistic values. The reasons for the attitudes can also be explored and weighed. Confronting teachers, parents and other adults with their own attitudes as well as those of the young can lead to enhancing self-examination and better communication between groups.

None of these suggestions are inexpensive and they all require painful adjustments in our usual ways of thinking and acting. There is no obviously easy way to control drug abuse. Do we really want control of drugs enough to make the necessary sacrifices?

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APPENDIX I.

Original
Risk-Taking Attitude Questionnaire

RISK-TAKING BEHAVIOR QUESTIONNAIRE

Richard E. Carney, Ph.D.

This questionnaire contains a number of questions concerning your attitudes toward the riskiness of certain behaviors, and the effectiveness of certain procedures for managing risk-taking behaviors.

The purpose of this research project is to obtain information which will help us in understanding patterns of risk-taking behavior. Obviously, there are no clearly "right" or "wrong" answers to any of these kinds of questions. They merely give you an opportunity to tell some of your opinions. For this reason, you should not spend too much time on any one question. Move on quickly from question to question.

Please read and answer each question in this questionnaire. There is only one answer for each question. Some questions may seem to repeat previous ones--answer these questions also. Make sure you answer all the questions on the pages. It will not take you long to answer each question.

If you have any questions about anything in this questionnaire or if there are some words you don't understand, please ask for help.

Instructions for you to follow that are not a regular part of a question are presented to you in a framed box, such as these instructions are. Begin on the next page as soon as you have finished reading this page.

All answers are made by punching the appropriate place on your IBM answer card. The items are numbered to correspond to the columns on the card (only even numbered columns are used on this card so the items will be numbered 2,4,6,8,etc.). Under each item will be a series of alternatives numbered to match the 0-9 numbers on each column of the IBM card. For example, if your subject number were 0001 you would punch 0 in Column 2, 0 in Column 4, 0 in Column 6, and 1 in Column 8. If your age is 18 you would punch 2 in Column 10. If your sex is male, punch 1 in Column 12.

Do not mark the question booklet in any way. If you make a mistake, circle the correct punch on the IBM card and punch this answer. If there are two punches in any one column, the correct punch should be circled.

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You should have two IBM answer cards with a number in the upper left-hand corner of each. This is your subject number which will be used to identify you. Your name will never be associated with this number in any public way so that you can be sure your answers will be kept confidential. You may answer these questions without any worry about your opinions being revealed to the world. Either card may be used first. Insert one card in the holder and punch according to the instructions below.

CARD I

BACKGROUND INFORMATION

COLUMN ON CARD

2,4,6,8, Punch your subject number (upper left of card) in these columns.

10 Age at last birthday:

Age	Punch	Age	Punch
13 or less =	0	19 =	5
14-15 =	1	20 =	6
16 =	2	21 =	7
17 =	3	22-25 =	8
18 =	4	26-30 =	9

12 Sex:

Sex	Punch
Female =	0
Male =	1

14 What is your religious preference?

Religion	Punch	Religion	Punch
Protestant =	0	Buddhist =	5
Roman Catholic =	1	Hindu =	6
Greek Orthodox =	2	Moslem =	7
Other Orthodox =	3	Unitarian, Universalist =	8
Jewish =	4	None =	9

16 Punch your present (or last completed if you are not in school) grade level.

Grade	Punch	Grade	Punch	Grade	Punch
9th =	0	1st year college =	4	Graduate work =	8
10th =	1	2nd year college =	5	Post-grad. wk =	9
11th =	2	3rd year college =	6		
12th =	3	4th year college =	7		

Part I: Individual Risk

Below are twenty behaviors which involve some degree of risk for any individual who engages in them. Punch using the seven-category scale below, the average degree of risk you believe an individual runs when he engages in each behavior.

Degree risk:	Lowest Risk			Average Risk			Highest Risk
Punch:	(1)	(2)	(3)	(4)	(5)	(6)	(7)

COLUMN ON CARD	TYPE OF RISK	COLUMN ON CARD	TYPE OF RISK
18	Smoking cigarettes	38	Riding a motorcycle
20	Driving a car	40	Playing football or similar contact sports
22	Vandalism or minor theft	42	Unmarried heterosexual intercourse
24	Changing jobs	44	Homosexual acts
26	Abortion	46	Marriage
28	Drag racing	48	Use of marijuana
30	Use of pep pills or "speed"	50	Cheating (on tests, taxes, etc.)
32	Smoking cigars or pipes	52	Use of LSD
34	Drinking alcohol	54	Fighting (two-person or gang type)
36	Participating in a protest demonstration	56	Use of heroin

Punch in rank order the three behaviors you feel are the most risky to an individual. Select the behaviors from the above list and punch the column number of each behavior as follows.
1. Most risky = Col. 58 & 60, 2. Next most risky = Col. 62 & 64,
3. Third most risky = Col. 66 & 68.

For example, if you think riding a motorcycle is the most risky behavior, punch 3 in column 58 and 8 in column 60. If you don't understand what you are to do here, ask the person giving the test to help you.

COL. ON CARD	BEHAVIOR RANKING
58 and 60	First most risky behavior (Punch column numbers from above list)
62 and 64	Second most risky behavior (Punch column numbers from above list)
66 and 68	Third most risky behavior (Punch column numbers from above list)

Part II: Social Risk

The same twenty behaviors are again listed below. For each, estimate the degree of risk that society encounters on the average when individuals engage in such behaviors (above and beyond the direct risk to the individual.) Punch on the following scale:

	Lowest Risk			Average Risk			Highest Risk
Punch:	(1)	(2)	(3)	(4)	(5)	(6)	(7)

COLUMN ON CARD	TYPE OF RISK
70	Smoking cigarettes
72	Driving a car
74	Vandalism or minor theft
76	Changing jobs
78	Abortion

Punch "1" in Column 80 of Card I. and go on to the next card. Remove Card I. from the holder and insert Card II.

CARD II.

Punch your subject number (upper left of card) in Columns 2,4,6,8 just as you did on Card I. and proceed with Park II.

COLUMN ON CARD	TYPE OF RISK	COLUMN ON CARD	TYPE OF RISK
10	Drag racing	24	Unmarried heterosexual intercourse
12	Use of pep pills and "speed"	26	Homosexual acts
14	Smoking cigars or pipes	28	Marriage
		30	Use of marijuana
16	Drinking alcohol	32	Cheating (on tests, taxes, etc.)
18	Participating in a protest demonstration	34	Use of LSD
20	Riding a motorcycle	36	Fighting (two-person gang type)
22	Playing football or similar contact sports	38	Use of Heroin

Punch in rank order the three behaviors you feel are most risky to society. Select behaviors from the above list as you did in Part I.

COLUMN ON CARD	BEHAVIOR RANKING
40 and 42	First most risky behavior (Punch column numbers from above list)
44 and 46	Second most risky behavior (Punch column numbers from above list)
48 and 50	Third most risky behavior (Punch column numbers from above list)

Part III.:

Below are some possible actions which might be taken to manage risk-taking behavior. Indicate the degree of probable effectiveness you believe that each might have by punching on the following scale:

	Lowest Effectiveness			Average Effectiveness			Highest Effectiveness
Punch:	(1)	(2)	(3)	(4)	(5)	(6)	(7)

COLUMN ON CARD	ACTION	COLUMN ON CARD	ACTION
52	Educational programs in the schools	62	Research to find safe substitutes
54	Personal example	64	Governmental programs to transform society
56	Church programs		
58	Clubs and community social and recreational programs	66	Tougher laws
		68	Stricter enforcement of the law
60	Advertising the dangers of smoking, etc.	70	Psychological programs such as therapy groups

Punch in rank order the two most effective management techniques from the above list.

COLUMN ON CARD	RANKING OF ACTION
72 & 74	Most effective action
76 & 78	Next most effective action

Punch 2 in Column 80 and remove the card from the holder. Turn in all materials to the person giving the questionnaire.

Thank you for your participation in this study. If you would like to make any written comments please put them on a separate sheet of paper, put your subject number on the top, and turn the sheet in with your cards.

APPENDIX II.

Adult Form

Risk-Taking Attitude Questionnaire

RISK-TAKING BEHAVIOR QUESTIONNAIRE

Adult Form

Richard E. Carney, Ph.D.

This questionnaire gives you a chance to express your opinion about the risks and rewards which go with certain behaviors. These behaviors may have some risk or danger. They may also give some satisfaction or reward in the form of usefulness, pleasure or thrills. Your honest opinions and feelings about these behaviors will help us to understand the attitude of adults toward their own behavior and toward the behavior of young people.

Since there are no clearly "right" or "wrong" answers you should not spend to much time on any one question. Just give your first thought and move on quickly to the next question. Please read and answer each question. Make sure you answer all the questions. Instructions that are not a regular part of the questions are in a framed box like the instructions you are reading. Begin on the next page as soon as you have finished reading this page.

There are also a number of items which describe you and your own background and habits. Since this questionnaire is given with no identification on it of any sort you may be sure that your answers are confidential and can not be associated with you in any way.

Thank you for your assistance in this research.

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All rights reserved. This questionnaire should not be given or reproduced without written permission of the author. Such permission will be given without charge to any non-profit or government institution that can insure adequate professional administration and evaluation of the results. Write to: Department of Psychology, United States International University, 3902 Lomaland Drive, San Diego, California 92107.

Circle the correct answer for each item.

1. My sex is:
   - a. Male
   - b. Female

2. My age at my last birthday was:
   - a. 18-21
   - b. 22-25
   - c. 26-30
   - d. 31-35
   - e. 36-40
   - f. 41-45
   - g. 46-50
   - h. 51-55
   - i. 56-60
   - j. 61 or older

3. My religious preference is:
   - a. Catholic
   - b. Greek Orthodox
   - c. Other Orthodox
   - d. Protestant or other Christian
   - e. Jewish
   - f. Buddhist
   - g. Hindu
   - h. Moslem
   - i. Unitarian or Universalist
   - j. None

4. If you are a Protestant what is your denomination?
   - a. Episcopalian - Anglican
   - b. Lutheran
   - c. Presbyterian
   - d. Methodist
   - e. Baptist
   - f. Fundamentalist
   - g. Mormon (LDS)
   - h. Christian Science
   - i. Christian, Disciples, United Church
   - j. Seventh Day Adventist

5. How often do you attend your place of worship (on the average)?
   - a. Weekly
   - b. Two or three times a month
   - c. Once a month
   - d. Occasionally
   - e. Only on major holidays like Easter, Christmas, or Passover
   - f. Less than once a year
   - g. Never

6. What is your family's income level?

   a. under $3,000
   b. $3,000 - $4,999
   c. $5,000 - $7,499
   d. $7,500 - $9,999
   e. $10,000 - $14,999
   f. $15,000 - $19,999
   g. $20,000 - $29,999
   h. $30,000 - $39,999
   i. $40,000 - $49,999
   j. $50,000 or more

7. How many years of school did you complete?

   a. 0 - 4
   b. 5 - 8
   c. 9 - 11
   d. 12
   e. 1 year college
   f. 2 years college
   g. 3 years college
   h. 4 years college
   i. 5 years college
   j. 6 or more years college

8. How often do you use each of these substances (check the appropriate level)?

		Never	Occasionally	Regularly but not daily	Light daily use	Heavy daily use
a.	Cigarettes	( )	( )	( )	( )	( )
b.	Cigars	( )	( )	( )	( )	( )
c.	Pipes	( )	( )	( )	( )	( )
d.	Beer and wine	( )	( )	( )	( )	( )
e.	Hard liquor	( )	( )	( )	( )	( )
f.	Tranquilizers	( )	( )	( )	( )	( )
g.	Coffee, tea and coke	( )	( )	( )	( )	( )
h.	Pep pills or energizers	( )	( )	( )	( )	( )
i.	Aspirin	( )	( )	( )	( )	( )
j.	Heroin or other hard narcotics	( )	( )	( )	( )	( )
k.	Laxatives	( )	( )	( )	( )	( )
l.	Marijuana	( )	( )	( )	( )	( )
m.	Blood tonics	( )	( )	( )	( )	( )
n.	Inhalant drugs (such as glue sniffing)	( )	( )	( )	( )	( )
o.	LSD or other hallucinogenes	( )	( )	( )	( )	( )

Everything we do has some danger or risk to it. You might be injured, made sick or even killed. You might get into trouble with your family or friends, lose your job or risk trouble with authorities. For each behavior you are to judge how much risk that you think you would run if you actually did that behavior. You are also to judge how much risk a young person of school age would run if they did the behavior.

Use the following scale and circle the appropriate level of risk:

1 = lowest risk

2 = some risk

3 = average risk

4 = above average risk

5 = highest risk

		Type of Risk									
		The Risk of Injury or Illness									
	Type of Behavior	Your Level of Risk					A Young Person's Level of Risk				
a.	Smoking cigarettes	1	2	3	4	5	1	2	3	4	5
b.	Driving a car	1	2	3	4	5	1	2	3	4	5
c.	Stealing small things (books or clothes)	1	2	3	4	5	1	2	3	4	5
d.	Moving to new area	1	2	3	4	5	1	2	3	4	5
e.	Abortion	1	2	3	4	5	1	2	3	4	5
f.	Sniffing glue or inhalants	1	2	3	4	5	1	2	3	4	5
g.	Drag racing	1	2	3	4	5	1	2	3	4	5
h.	Use of pep pills or "speed"	1	2	3	4	5	1	2	3	4	5
i.	Smoking cigars or pipes	1	2	3	4	5	1	2	3	4	5
j.	Drinking beer or wine	1	2	3	4	5	1	2	3	4	5
k.	Demonstrating to protest about school or society	1	2	3	4	5	1	2	3	4	5
l.	Riding a motorcycle	1	2	3	4	5	1	2	3	4	5
m.	Playing football or other rough sports	1	2	3	4	5	1	2	3	4	5
n.	Unmarried sexual intercourse	1	2	3	4	5	1	2	3	4	5
o.	Drinking hard liquor	1	2	3	4	5	1	2	3	4	5
p.	Gang Fighting	1	2	3	4	5	1	2	3	4	5
q.	Homosexual acts	1	2	3	4	5	1	2	3	4	5
r.	Marriage	1	2	3	4	5	1	2	3	4	5
s.	Smoking marijuana	1	2	3	4	5	1	2	3	4	5
t.	Cheating (on tests, taxes, etc.)	1	2	3	4	5	1	2	3	4	5
u.	Stealing things like purses or cars	1	2	3	4	5	1	2	3	4	5
v.	Two-person fighting	1	2	3	4	5	1	2	3	4	5
w.	Use of heroin	1	2	3	4	5	1	2	3	4	5
x.	Main-lining any drug	1	2	3	4	5	1	2	3	4	5
y.	Use of LSD	1	2	3	4	5	1	2	3	4	5

Type of Behavior		Type of Risk									
		The Risk of Personal or Social Disapproval									
		Your Level of Risk					A Young Person's Level of Risk				
a.	Smoking cigarettes	1	2	3	4	5	1	2	3	4	5
b.	Driving a car	1	2	3	4	5	1	2	3	4	5
c.	Stealing small things (books or clothes)	1	2	3	4	5	1	2	3	4	5
d.	Moving to new area	1	2	3	4	5	1	2	3	4	5
e.	Abortion	1	2	3	4	5	1	2	3	4	5
f.	Sniffing glue or inhalants	1	2	3	4	5	1	2	3	4	5
g.	Drag racing	1	2	3	4	5	1	2	3	4	5
h.	Use of pep pills or "speed"	1	2	3	4	5	1	2	3	4	5
i.	Smoking cigars or pipes	1	2	3	4	5	1	2	3	4	5
j.	Drinking beer or wine	1	2	3	4	5	1	2	3	4	5
k.	Demonstrating to protest about school or society	1	2	3	4	5	1	2	3	4	5
l.	Riding a motorcycle	1	2	3	4	5	1	2	3	4	5
m.	Playing football or other rough sports	1	2	3	4	5	1	2	3	4	5
n.	Unmarried sexual intercourse	1	2	3	4	5	1	2	3	4	5
o.	Drinking hard liquor	1	2	3	4	5	1	2	3	4	5
p.	Gang fighting	1	2	3	4	5	1	2	3	4	5
q.	Homosexual acts	1	2	3	4	5	1	2	3	4	5
r.	Marriage	1	2	3	4	5	1	2	3	4	5
s.	Smoking marijuana	1	2	3	4	5	1	2	3	4	5
t.	Cheating (on tests, taxes, etc.)	1	2	3	4	5	1	2	3	4	5
u.	Stealing things like purses or cars	1	2	3	4	5	1	2	3	4	5
v.	Two-person fighting	1	2	3	4	5	1	2	3	4	5
w.	Use of heroin	1	2	3	4	5	1	2	3	4	5
x.	Main-lining any drug	1	2	3	4	5	1	2	3	4	5
	of	1	2			5		2	3		

Every risky behavior obviously offers you some gain or reward or you wouldn't risk it. The gain or reward could be useful, pleasant or thrilling. Now rate the behaviors for the amount of gain or reward they offer using the following scale:

1 = Lowest possible gain or reward

2 = Some gain or reward

3 = Average gain or reward

4 = Above average gain or reward

5 = Highest gain or reward

Type of Gain or Reward

Solution of or Escape from Problems

	Type of Behavior	Your Reward or Gain	A Young Person's Gain or Reward
a.	Smoking cigarettes	1 2 3 4 5	1 2 3 4 5
b.	Driving a car	1 2 3 4 5	1 2 3 4 5
c.	Stealing small things (books or clothes)	1 2 3 4 5	1 2 3 4 5
d.	Moving to new area	1 2 3 4 5	1 2 3 4 5
e.	Abortion	1 2 3 4 5	1 2 3 4 5
f.	Sniffing glue or inhalants	1 2 3 4 5	1 2 3 4 5
g.	Drag racing	1 2 3 4 5	1 2 3 4 5
h.	Use of pep pills or "speed"	1 2 3 4 5	1 2 3 4 5
i.	Smoking cigars or pipes	1 2 3 4 5	1 2 3 4 5
j.	Drinking beer or wine	1 2 3 4 5	1 2 3 4 5
k.	Demonstrating to protest about school or society	1 2 3 4 5	1 2 3 4 5
l.	Riding a motorcycle	1 2 3 4 5	1 2 3 4 5
m.	Playing football or other rough sports	1 2 3 4 5	1 2 3 4 5
n.	Unmarried sexual intercourse	1 2 3 4 5	1 2 3 4 5
o.	Drinking hard liquor	1 2 3 4 5	1 2 3 4 5
p.	Gang fighting	1 2 3 4 5	1 2 3 4 5
q.	Homosexual acts	1 2 3 4 5	1 2 3 4 5
r.	Marriage	1 2 3 4 5	1 2 3 4 5
s.	Smoking marijuana	1 2 3 4 5	1 2 3 4 5
t.	Cheating (on tests, taxes, etc.)	1 2 3 4 5	1 2 3 4 5
u.	Stealing things like purses or cars	1 2 3 4 5	1 2 3 4 5
v.	Two-person fighting	1 2 3 4 5	1 2 3 4 5
w.	Use of heroin	1 2 3 4 5	1 2 3 4 5
x.	Main-lining any drug	1 2 3 4 5	1 2 3 4 5
y.	Use of LSD	1 2 3 4 5	1 2 3 4 5

Type of Gain or Reward

A Feeling of Pleasure or Excitement

	Type of Behavior	Your Reward or Gain					A Young Person's Gain or Reward				
a.	Smoking cigarettes	1	2	3	4	5	1	2	3	4	5
b.	Driving a car	1	2	3	4	5	1	2	3	4	5
c.	Stealing small things (books or clothes)	1	2	3	4	5	1	2	3	4	5
d.	Moving to new area	1	2	3	4	5	1	2	3	4	5
e.	Abortion	1	2	3	4	5	1	2	3	4	5
f.	Sniffing glue or inhalants	1	2	3	4	5	1	2	3	4	5
g.	Drag racing	1	2	3	4	5	1	2	3	4	5
h.	Use of pep pills or "speed"	1	2	3	4	5	1	2	3	4	5
i.	Smoking cigars or pipes	1	2	3	4	5	1	2	3	4	5
j.	Drinking beer or wine	1	2	3	4	5	1	2	3	4	5
k.	Demonstrating to protest about school or society	1	2	3	4	5	1	2	3	4	5
l.	Riding a motorcycle	1	2	3	4	5	1	2	3	4	5
m.	Playing football or other rough sports	1	2	3	4	5	1	2	3	4	5
n.	Unmarried sexual intercourse	1	2	3	4	5	1	2	3	4	5
o.	Drinking hard liquor	1	2	3	4	5	1	2	3	4	5
p.	Gang fighting	1	2	3	4	5	1	2	3	4	5
q.	Homosexual acts	1	2	3	4	5	1	2	3	4	5
r.	Marriage	1	2	3	4	5	1	2	3	4	5
s.	Smoking marijuana	1	2	3	4	5	1	2	3	4	5
t.	Cheating (on tests, taxes, etc.)	1	2	3	4	5	1	2	3	4	5
u.	Stealing things like purses or cars	1	2	3	4	5	1	2	3	4	5
v.	Two-person fighting	1	2	3	4	5	1	2	3	4	5
w.	Use of heroin	1	2	3	4	5	1	2	3	4	5
x.	Main-lining any drug	1	2	3	4	5	1	2	3	4	5
y.	Use of LSD	1	2	3	4	5	1	2	3	4	5

Many actions are taken to prevent or replace dangerous and risky behavior. How effective would each of the actions or substitutes listed below be for stopping or serving as a substitute for the types of risky behaviors listed?

Rate each action for yourself and for young people on this five point scale:

1 = Least effectiveness

2 = Some effectiveness

3 = Average effectiveness

4 = Above average effectiveness

5 = Most or highest effectiveness

	Type of Action or Substitute for Behavior	Type of Behavior: Smoking, Drinking and Misusing Legal Drugs									
		Effectiveness for You					Effectiveness for Young People				
a.	Educational programs in school	1	2	3	4	5	1	2	3	4	5
b.	Good personal example by friends	1	2	3	4	5	1	2	3	4	5
c.	Church programs	1	2	3	4	5	1	2	3	4	5
d.	Clubs and other social and recreational groups	1	2	3	4	5	1	2	3	4	5
e.	Advertising the dangers of the behavior on TV, etc.	1	2	3	4	5	1	2	3	4	5
f.	A closer relationship with parents	1	2	3	4	5	1	2	3	4	5
g.	Finding someone to love	1	2	3	4	5	1	2	3	4	5
h.	Tougher laws and law enforcement	1	2	3	4	5	1	2	3	4	5
i.	Dropping out of school or changing jobs if you are no longer in school	1	2	3	4	5	1	2	3	4	5
j.	Psychological counseling and therapy	1	2	3	4	5	1	2	3	4	5

		Type of Behavior									
		Drag Racing, Fighting and Wild Behavior									
	Type of Action or Substitute for Behavior	Effectiveness for You					Effectiveness for Young People				
a.	Educational programs in school	1	2	3	4	5	1	2	3	4	5
b.	Good personal example by friends	1	2	3	4	5	1	2	3	4	5
c.	Church programs	1	2	3	4	5	1	2	3	4	5
d.	Clubs and other social and recreational groups	1	2	3	4	5	1	2	3	4	5
e.	Advertising the dangers of the behavior on TV, etc.	1	2	3	4	5	1	2	3	4	5
f.	A closer relationship with parents	1	2	3	4	5	1	2	3	4	5
g.	Finding someone to love	1	2	3	4	5	1	2	3	4	5
h.	Tougher laws and law enforcement	1	2	3	4	5	1	2	3	4	5
i.	Dropping out of school or changing jobs if you are no longer in school	1	2	3	4	5	1	2	3	4	5
j.	Psychological counseling and therapy	1	2	3	4	5	1	2	3	4	5

	Type of Action or Substitute for Behavior	Type of Behavior Illegal or Immoral Sex Behavior									
		Effectiveness for You					Effectiveness for Young People				
a.	Educational programs in school	1	2	3	4	5	1	2	3	4	5
b.	Good personal example by friends	1	2	3	4	5	1	2	3	4	5
c.	Church programs	1	2	3	4	5	1	2	3	4	5
d.	Clubs and other social and recreational groups	1	2	3	4	5	1	2	3	4	5
e.	Advertising the dangers of the behavior on TV, etc.	1	2	3	4	5	1	2	3	4	5
f.	A closer relationship with parents	1	2	3	4	5	1	2	3	4	5
g.	Finding someone to love	1	2	3	4	5	1	2	3	4	5
h.	Tougher laws and law enforcement	1	2	3	4	5	1	2	3	4	5
i.	Dropping out of school or changing jobs if you are no longer in school	1	2	3	4	5	1	2	3	4	5
j.	Psychological counseling and therapy	1	2	3	4	5	1	2	3	4	5

		Type of Behavior									
		Use of Illegal Drugs Like Marijuana									
	Type of Action or Substitute for Behavior	Effectiveness for You					Effectiveness for Young People				
a.	Educational programs in school	1	2	3	4	5	1	2	3	4	5
b.	Good personal example by friends	1	2	3	4	5	1	2	3	4	5
c.	Church programs	1	2	3	4	5	1	2	3	4	5
d.	Clubs and other social and recreational groups	1	2	3	4	5	1	2	3	4	5
e.	Advertising the dangers of the behavior on TV, etc.	1	2	3	4	5	1	2	3	4	5
f.	A closer relationship with parents	1	2	3	4	5	1	2	3	4	5
g.	Finding someone to love	1	2	3	4	5	1	2	3	4	5
h.	Tougher laws and law enforcement	1	2	3	4	5	1	2	3	4	5
i.	Dropping out of school or changing jobs if you are no longer in school	1	2	3	4	5	1	2	3	4	5
j.	Psychological counseling and therapy	1	2	3	4	5	1	2	3	4	5

		Type of Behavior Cheating and Stealing									
Type of Action or Substitute for Behavior		Effectiveness for You					Effectiveness for Young People				
a.	Educational programs in school	1	2	3	4	5	1	2	3	4	5
b.	Good personal example by friends	1	2	3	4	5	1	2	3	4	5
c.	Church programs	1	2	3	4	5	1	2	3	4	5
d.	Clubs and other social and recreational groups	1	2	3	4	5	1	2	3	4	5
e.	Advertising the dangers of the behavior on TV, etc.	1	2	3	4	5	1	2	3	4	5
f.	A closer relationship with parents	1	2	3	4	5	1	2	3	4	5
g.	Finding someone to love	1	2	3	4	5	1	2	3	4	5
h.	Tougher laws and law enforcement	1	2	3	4	5	1	2	3	4	5
i.	Dropping out of school or changing jobs if you are no longer in school	1	2	3	4	5	1	2	3	4	5
j.	Psychological counseling and therapy	1	2	3	4	5	1	2	3	4	5

APPENDIX III

Secondary Form
Risk-Taking Attitude Questionnaire

RISK-TAKING BEHAVIOR QUESTIONNAIRE

Secondary Level

Richard E. Carney, Ph. D.

Much has been said about what young people do and how they feel about the things that they do. However, very little is really known about this. This questionnaire gives you a chance to express your opinion about the dangers and "rewards" which go with certain behaviors. These behaviors may have some risk or danger. They may also give some satisfaction or reward in the form of pleasure or thrills.

If you will give your honest opinions and feelings about these behaviors you will help us to understand the real attitudes of today's young people. You can be sure that your answers will be kept confidential and that no one will ever be able to use them against you.

Since there are no clearly "right" or "wrong" answers you should not spend too much time on any one question. Just give your first thought and move on quickly to the next question. Please read and answer each question. Make sure you answer all the questions. Instructions that are not a regular part of a question are in a framed box like the instructions you are reading. Begin on the next page as soon as you have finished reading this page.

Do not mark this question booklet in any way.

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All rights reserved. This questionnaire should not be given or reproduced without written permission of the author. Such permission will be given without charge to any non-profit or government institution that can insure adequate professional administration and evaluation of the results. Write to: Department of Psychology, United States International University, 3902 Lomaland Drive, San Diego, California 92107.

All answers to this questionnaire are made by punching out a specific number on an answer card that will later be "fed" to the IBM computer. Take out a card from your envelope of cards and look at it. Notice that we will not use the section for name or student number--this will assure you of complete privacy. Since we will use 5 cards it will be necessary to number each card so that the computer will know which questions you are answering. Each item on the questionnaire is numbered to match the place on the card. Notice the left side of the card. We will use the section marked "Test Code" to identify each of the 5 cards. Now look again at the card. Notice to the RIGHT of the double line after the word "SCORE" there are 30 numbered columns. Slightly over an inch down on the card you will see columns 31 to 59. Under each column are the numbers that will indicate your answer to each question. Thus you will be punching out a 1,2,3,4, or 5 which will correspond to the rating you select as your own answer. This will be explained again later, but if you don't understand put your hand up.

Now, take a card (the one you were looking at will do) and place it over the black spongelike pad. Using ONLY the special plastic stylus furnished, you will now be able to answer any question by punching out the specific number in the exact column you are directed by the question to use.

First, under the heading "TEST CODE" punch 0 in column 10 and 0 in column 12. This now identifies this card as the first one you are using.

If you make a mistake, draw a circle around the correct punch and punch out this answer. Don't worry about the error! If there is more than one punch under any item, only the correct punch which you have circled will be counted.

1. Punch in column 14 under "Test Code" your age at your last birthday.

10 or less punch 0
11 punch 1
12 punch 2
13 punch 3
14 punch 4
15 punch 5
16 punch 6
17 punch 7
18 punch 8
19 or more punch 9

2. If you are Female punch 0 in column 16 (under "Score").

If you are Male punch 1 in column 16 (under "Score").

3. Punch in column 18 (under "Score") if your religious preference is:

Catholic ------------------------punch 0
Greek Orthodox-------------------punch 1
Other Orthodox-------------------punch 2
Protestant and other Christian---punch 3
Jewish---------------------------punch 4
Buddhist-------------------------punch 5
Hindu----------------------------punch 6
Moslem---------------------------punch 7
Unitarian or Universalist--------punch 8
None-----------------------------punch 9

4. Punch in column 20 (under "Score") your present grade level (or last completed grade if you are not now in school).

If in:
6th grade punch 0
7th grade punch 1
8th grade punch 2
9th grade punch 3
10th grade punch 4
11th grade punch 5
12th grade punch 6
1st year college punch 7
2nd year college punch 8
last 2 years college punch 9

Everything we do has some danger or risk to it. You might be injured, made sick or even killed. You might get into trouble with your family or friends or with school authorities or even with the police. Below is a list of more or less risky behaviors. For each behavior you are to judge how much risk that you think you would run if you actually did that behavior. There are five places under each answer space on your card. Rate each behavior on a five-point scale:

lowest risk = 1
some risk = 2
average risk = 3
above average risk = 4
highest risk = 5

For example, if you think smoking cigarettes gives you an above average risk of injury or illness but less than the "highest risk" you would punch 4 under column 1 on that card. If you honestly do not know or understand the meaning of any listed behavior please skip that one and go on to the next item.

Notice now that all your answers will be punched in that part of the card to the right of the double line and numbered clearly as columns 1 to 59.

RISK OF INJURY OR ILLNESS

Use the 1 to 5 scale on Page 4
and
punch your answer in
Column

TYPE OF BEHAVIOR

A.	Smoking cigarettes	1
B.	Driving a car	2
C.	Stealing small things (books or clothes)	3
D.	Moving to new area	4
E.	Abortion	5
F.	Sniffing glue or inhalants	6
G.	Drag racing	7
H.	Use of pep pills or "speed"	8
I.	Smoking cigars or pipes	9
J.	Drinking beer or wine	10
K.	Demonstrating to protest about school or society	11
L.	Riding a motorcycle	12
M.	Playing football or other rough sports	13
N.	Sexual intercourse	14
O.	Drinking hard liquor	15
P.	Gang fighting	16
Q.	Homosexual acts	17
R.	Teen-age marriage	18
S.	Smoking marijuana	19
T.	Cheating (on tests, taxes, etc.)	20
U.	Stealing things like purses or cars	21
V.	Two person fighting	22
W.	Use of heroin	23
X.	Main-lining any drug	24
Y.	Use of LSD	25

Now we repeat the same "Behaviors" but this time the type of risk will be:

LOSS OF SELF-RESPECT

TYPE OF BEHAVIOR	Use the 1 to 5 scale on Page 4 and punch your answer in Column
A. Smoking cigarettes	26
B. Driving a car	27
C. Stealing small things (books or clothes)	28
D. Moving to new area	29
E. Abortion	30

NOTICE: Look down on your card. About an inch up from the bottom you will see the numbers for columns 31 to 59. All of your punches on this card will now be in this area.

F. Sniffing glue or inhalants	31
G. Drag racing	32
H. Use of pep pills or "speed"	33
I. Smoking cigars or pipes	34
J. Drinking beer or wine	35
K. Demonstrating to protest about school or society	36
L. Riding a motorcycle	37
M. Playing football or other rough sports	38
N. Sexual intercourse	39
O. Drinking hard liquor	40
P. Gang fighting	41
Q. Homosexual acts	42
R. Teen-age marriage	43
S. Smoking marijuana	44
T. Cheating (on tests, taxes, etc.)	45
U. Stealing things like purses or cars	46
V. Two-person fighting	47
W. Use of heroin	48
X. Main-lining any drug	49
Y. Use of LSD	50

Now place the "00" card in your card envelope and take a new card. This will be your card number "01." Now punch "0" in column 10 and "1" in column 12 under "Test Code."

Using the same punch out method as before, again rate the risk of Losing Your Friends you feel would result from each type of behavior. Remember the risk code:

lowest risk = 1
some risk = 2
average risk = 3
above average risk = 4
highest risk = 5

Remember: If you honestly don't know or understand the meaning of any word or phrase, skip it and go on to the next item.

Now we repeat the same "Behaviors" but this time the type of risk will be:

RISK OF LOSING FRIENDS

	TYPE OF BEHAVIOR	Punch your answer in Column
A.	Smoking cigarettes	1
B.	Driving a car	2
C.	Stealing small things (books or clothes)	3
D.	Moving to new area	4
E.	Abortion	5
F.	Sniffing glue or inhalants	6
G.	Drag racing	7
H.	Use of pep pills or "speed"	8
I.	Smoking cigars or pipes	9
J.	Drinking beer or wine	10
K.	Demonstrating to protest about school or society	11
L.	Riding a motorcycle	12
M.	Playing football or other rough sports	13
N.	Sexual intercourse	14
O.	Drinking hard liquor	15
P.	Gang fighting	16
Q.	Homosexual acts	17
R.	Teen-age marriage	18
S.	Smoking marijuana	19
T.	Cheating (on tests, taxes, etc.)	20
U.	Stealing things like purses or cars	21
V.	Two-person fighting	22
W.	Use of heroin	23
X.	Main-lining any drug	24
Y.	Use of LSD	25

Again we repeat the same "Behaviors" but this time the type of risk will be:

RISK OF TROUBLE WITH THE LAW OR SCHOOL AUTHORITIES

TYPE OF BEHAVIOR	Punch your answer in Column
A. Smoking cigarettes	26
B. Driving a car	27
C. Stealing small things (books or clothes)	28
D. Moving to new area	29
E. Abortion	30

Remember to go now to the bottom half of the card where columns are numbered from 31 to 59.

TYPE OF BEHAVIOR	Punch your answer in Column
F. Sniffing glue or inhalants	31
G. Drag racing	32
H. Use of pep pills or "speed"	33
I. Smoking cigars or pipes	34
J. Drinking beer or wine	35
K. Demonstrating to protest about school or society	36
L. Riding a motorcycle	37
M. Playing football or other rough sports	38
N. Sexual intercourse	39
O. Drinking hard liquor	40
P. Gang fighting	41
Q. Homosexual acts	42
R. Teen-age marriage	43
S. Smoking marijuana	44
T. Cheating (on tests, taxes, etc.)	45
U. Stealing things like purses or cars	46
V. Two-person fighting	47
W. Use of heroin	48
X. Main-lining any drug	49
Y. Use of LSD	50

Now place the "01" card in the card envelope and place a new card on top of the plastic holder. This is your card number "02." Now punch "0" in column 10 and "2" in column 12 under "Test Code."

Every risky behavior obviously offers you some gain or reward or you would not risk it. The gain or reward could be useful, pleasant or thrilling. Now using the same punch out method rate the gain or reward as follows:

Lowest possible gain or reward = punch 1
Some gain or reward = punch 2
Average gain or reward = punch 3
Above average gain or reward = punch 4
Highest gain or reward = punch 5

Gain or Reward
FEELING GROWN-UP OR ADULT

	TYPE OF BEHAVIOR	Punch your answer in Column
A.	Smoking cigarettes	1
B.	Driving a car	2
C.	Stealing small things (books or clothes)	3
D.	Moving to new area	4
E.	Abortion	5
F.	Sniffing glue or inhalants	6
G.	Drag Racing	7
H.	Use of pep pills or "speed"	8
I.	Smoking cigars or pipes	9
J.	Drinking beer or wine	10
K.	Demonstrating to protest about school or society	11
L.	Riding a motorcycle	12
M.	Playing football or other rough sports	13
N.	Sexual intercourse	14
O.	Drinking hard liquor	15
P.	Gang fighting	16
Q.	Homosexual acts	17
R.	Teen-age marriage	18
S.	Smoking marijuana	19
T.	Cheating (on tests, taxes, etc.)	20
U.	Stealing things like purses or cars	21
V.	Two-person fighting	22
W.	Use of heroin	23
X.	Main-lining any drug	24
Y.	Use of LSD	25

Gain or Reward
MORE OR BETTER FRIENDS

Punch your answer in Column

TYPE OF BEHAVIOR

A.	Smoking cigarettes	26
B.	Driving a car	27
C.	Stealing small things (books or clothes)	28
D.	Moving to new area	29
E.	Abortion	30

Now go down to lower half of card and continue in columns numbered from 31 to 59.

F.	Sniffing glue or inhalants	31
G.	Drag racing	32
H.	Use of pep pills or "speed"	33
I.	Smoking cigars or pipes	34
J.	Drinking beer or wine	35
K.	Demonstrating to protest about school or society	36
L.	Riding a motorcycle	37
M.	Playing football or other rough sports	38
N.	Sexual intercourse	39
O.	Drinking hard liquor	40
P.	Gang fighting	41
Q.	Homosexual acts	42
R.	Teen-age marriage	43
S.	Smoking marijuana	44
T.	Cheating (on tests, taxes, etc.)	45
U.	Stealing things like purses or cars	46
V.	Two-person fighting	47
W.	Use of heroin	48
X.	Main-lining any drug	49
Y.	Use of LSD	50

Now place the "02" card in the card envelope and place a new card on top of the plastic holder. This is your card number "03." Now punch "0" in column 10 and "3" in column 12 under "Test Code."

Remember the gain or reward code:

Lowest possible gain or reward = punch 1
Some gain or reward = punch 2
Average gain or reward = punch 3
Above average gain or reward = punch 4
Highest gain or reward = punch 5

Gain or Reward
A THRILL OR EXCITEMENT

	TYPE OF BEHAVIOR	Punch your answer in Column
A.	Smoking cigarettes	1
B.	Driving a car	2
C.	Stealing small things (books or clothes)	3
D.	Moving to new area	4
E.	Abortion	5
F.	Sniffing glue or inhalants	6
G.	Drag racing	7
H.	Use of pep pills or "speed"	8
I.	Smoking cigars or pipes	9
J.	Drinking beer or wine	10
K.	Demonstrating to protest about school or society	11
L.	Riding a motorcycle	12
M.	Playing football or other rough sports	13
N.	Sexual intercourse	14
O.	Drinking hard liquor	15
P.	Gang fighting	16
Q.	Homosexual acts	17
R.	Teen-age marriage	18
S.	Smoking marijuana	19
T.	Cheating (on tests, taxes, etc.)	20
U.	Stealing things like purses or cars	21
V.	Two-person fighting	22
W.	Use of heroin	23
X.	Main-lining any drug	24
Y.	Use of LSD	25

Gain or Reward
A GOOD FEELING INSIDE

TYPE OF BEHAVIOR	Punch your answer in Column
A. Smoking cigarettes	26
B. Driving a car	27
C. Stealing small things (books or clothes)	28
D. Moving to new area	29
E. Abortion	30

Now go down to lower half of card and continue in columns numbered from 31 to 59.

F. Sniffing glue or inhalants	31
G. Drag racing	32
H. Use of pep pills or "speed"	33
I. Smoking cigars or pipes	34
J. Drinking beer or wine	35
K. Demonstrating to protest about school or society	36
L. Riding a motorcycle	37
M. Playing football or other rough sports	38
N. Sexual intercourse	39
O. Drinking hard liquor	40
P. Gang fighting	41
Q. Homosexual acts	42
R. Teen-age marriage	43
S. Smoking marijuana	44
T. Cheating (on tests, taxes, etc.)	45
U. Stealing things like purses or cars	46
V. Two-person fighting	47
W. Use of heroin	48
X. Main-lining any drug	49
Y. Use of LSD	50

Place the "03" card in your card envelope and take a new card again. This is your card number "04." Now punch "0" in column 10 and "4" in column 12 under "Test Code."

Many actions are taken by adult authorities to prevent or replace dangerous and risky behavior by young people. How effective would each of the actions or substitutes listed below be for stoping your, or for serving as a substitute for the types of risky behavior listed? Rate each action on this 5-point scale:

Least effectiveness on you = 1
Some effectiveness on you = 2
Average effectiveness on you = 3
Above average effectiveness on you = 4
Most of highest effectiveness on you = 5

TYPE OF ACTION
OR SUBSTITUTE FOR BEHAVIOR

Type of Behavior

SMOKING, DRINKING AND
MISUSING LEGAL DRUGS

Punch your answer in
Column

A. Educational programs in school________________ 1 ________

B. Good personal example by friends________________ 2 ________

C. Church programs________________ 3 ________

D. Clubs and other social and recreational groups________________ 4 ________

E. Advertising the dangers of the behavior on TV, etc.________________ 5 ________

F. A closer relationship with parents________________ 6 ________

G. Finding someone to love________________ 7 ________

H. Tougher laws and law enforcement________________ 8 ________

I. Dropping out of school________________ 9 ________

J. Psychological counseling and therapy________________ 10 ________

TYPE OF ACTION
OR SUBSTITUTE FOR BEHAVIOR

Type of Behavior

DRAG RACING, FIGHTING
AND WILD BEHAVIOR

Punch your answer in
Column

A.	Educational programs in school	11
B.	Good personal example by friends	12
C.	Church programs	13
D.	Clubs and other social and recreational groups	14
E.	Advertising the dangers of the behavior on TV, etc.	15
F.	A closer relationship with parents	16
G.	Finding someone to love	17
H.	Tougher laws and law enforcement	18
I.	Dropping out of school	19
J.	Psychological counseling and therapy	20

TYPE ACTION
OR SUBSTIT FOR BEHAVIOR

Type of Behavior

ILLEGAL OR IMMORAL SEX BEHAVIOR

Punch your answer in Column

A.	Educational programs in school	21
B.	Good personal example by friends	22
C.	Church programs	23
D.	Clubs and other social and recreational groups	24
E.	Advertising the dangers of the behavior on TV, etc.	25
F.	A closer relationship with parents	26
G.	Finding someone to love	27
H.	Tougher laws and law enforcement	28
I.	Dropping out of school	29
J.	Psychological counseling and therapy	30

TYPE OF ACTION
OR SUBSTITUTE FOR BEHAVIOR

Type of Behavior

USE OF ILLEGAL DRUGS
LIKE MARIJUANA

Punch your answer in
Column

A.	Educational programs in school	31
B.	Good personal example by friends	32
C.	Church programs	33
D.	Clubs and other social and recreational groups	34
E.	Advertising the dangers of the behavior on TV, etc.	35
F.	A closer relationship with parents	36
G.	Finding someone to love	37
H.	Tougher laws and law enforcement	38
I.	Dropping out of school	39
J.	Psychological counseling and therapy	40

TYPE OF ACTION
OR SUBSTITUTE FOR BEHAVIOR

Type of Behavior

CHEATING AND STEALING

Punch your answer in Column

A.	Educational programs in school	41
B.	Good personal example by friends	42
C.	Church programs	43
D.	Clubs and other social and recreational groups	44
E.	Advertising the dangers of the behavior on TV, etc.	45
F.	A closer relationship with parents	46
G.	Finding someone to love	47
H.	Tougher laws and law enforcement	48
I.	Dropping out of school	49
J.	Psychological counseling and therapy	50

Place the "04" card in the card envelope and take an unused card. This is your card number "05." Now punch "0" in column 10 and "5" in column 12 under "Test Code."

The following and the last section of this questionnaire is to provide checking information only. You need not reply if you do not wish to do so. Remember you cannot be identified. If you do answer please be as frank and as honest as possible so that you will truly help make this a valid check.

Using the same punch out method as before, indicate your personal use of non-use of the following drugs, narcotics, inhalants and psychedelics without a doctor's approval or prescription on this five point scale:

"I have never used ..."	Punch 1
"I have tried ... experimentally 1 to 5 times."	Punch 2
"I have used ... approximately 6 to 10 times."	Punch 3
"I have used ... approximately 11 to 35 times."	Punch 4
"I have used ... weekly or more or less regularly."	Punch 5

(DO NOT indicate in this rating any drug you have taken at the specific prescription of your doctor of medicine for illness, disease, or physical condition.)

TYPE OF USE	Punch your answer in Column
A. Marijuana (pot, grass, weed)	1
B. Hallucinogens (LSD, STP, DMT)	2
C. Amphetamines (pep pills, uppers, speed, crystal, methedrine)	3
D. Barbiturates (phenobarbital, nembutal, seconal, downers, tranquilizers)	4
E. Opiates (morphine, heroin)	5
F. Inhalants (airplane glue, gasoline, aerosols)	6
G. Tobacco (cigarettes, cigars, pipes)	7
H. Alcohol (beer, wines, whiskey, etc.)	8
I. Aspirin	9

When you have finished please place this card (together with all your other cards) in the card envelope and seal it. DO NOT WRITE ON CARDS OR ENVELOPE.

APPENDIX IV.

Revised College Form
Risk-Taking Attitude Questionnaire

REVISED COLLEGE RISK TAKING QUESTIONNAIRE

This questionnaire is designed to sample people's attitudes concerning the amount of risk of punishment or loss of social status involved in various behaviors, how prevalent these behaviors are, and what people feel they get out of them (motivation). Since some of the questions are highly personal no names or subject numbers are desired. In addition all possible steps will be taken to keep anonymous the responses of all subjects. Nevertheless if you feel that you do not want to participate in all or any part of the third section concerning personal experiences that is perfectly permissable. The purpose of the experiment is to determine what risk taking behaviors are most common and why people choose a particular form of risky behavior rather than another.

PART I

My religious affiliation is (check one):

1. Protestant______
2. Catholic ______
3. Other ______
4. None ______

sex: male______ female______

age________

marital status: single___ married___

PART II

Directions: Select the letter A through E on your I.B.M. punch card which best approximates the degree of personal risk of punishment or loss of social status you believe is involved in the behavior given. (turn to next page)

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A. Extremely great risk involved.
B. Considerable risk involved.
C. Average risk involved.
D. Less than average risk involved.
E. Little or no risk involved.

1. Smoking of marijuana.
2. Cheating on an exam or paper.
3. Driving or riding in a car at illegally high speeds.
4. Playing of contact sports such as football.
5. Engaging in premarital sexual intercourse.
6. Stealing a large article i.e. worth over $50.
7. Using heroin or cocaine.
8. Drinking an alcoholic beverage until its effects are felt.
9. Smoking half a pack of cigarettes per day. (or more)
10. Using pep pills, barbiturates or speed.

PART III

Since this section contains questions which are highly personal participation in it is at your option. All subjects responses will be anonymous but if you don't feel secure in this fact, or for any other reason do not wish to participate in this section, do not. A false answer will be of less value to this project than no answer at all, therefore please answer only those questions to which you feel safe in giving a truthful reply. Thank you.

Directions: Select the letter A through E on your I.B.M. punch card which best describes your participation in the behavior named.

A. Never engaged in the behavior named.
B. Have engaged in the behavior named only once or twice.
C. Have engaged in the behavior named only on infrequent occasions.
D. Engage in behavior named somewhat regularly (a few times per month).
E. Engage in behavior named frequently (once a week or more).

11. Smoking of marijuana.
12. Cheating on an exam or paper.
13. Driving or riding in a car at illegally high speeds.
14. Playing contact sports such as football.
15. Engaging in premarital sexual intercourse.
16. Stealing a large article i.e. worth over $50.
17. Using heroin or cocaine.
18. Drinking an alcoholic beverage until its effects are felt.
19. Smoking half a pack of cigarettes per day (or more).
20. Using pep pills, barbiturates or speed.

For those behaviors which you indicated participation indicate below the age (approximate) when you first took part in the behavior and when two or more behaviors all started at the same age indicate which came first by putting a number in parenthesis beside the age.

e.g. 15(1) 15(2) etc.

1. Smoking of marijuana. age____
2. Cheating on an exam or paper. age____
3. Driving or riding in a car at illegally high speeds. age____
4. Playing of contact sports such as football. age____
5. Engaging in premarital sexual intercourse. age____
6. Stealing a large article i.e. worth over $50. age____
7. Using heroin or cocaine. age____
8. Drinking an alcoholic beverage until its effects are felt. age____
9. Smoking half a pack of cigarettes per day. age____
10. Using pep pills, barbiturates or speed. age____

PART IV

Directions: Everyone has differing goals in life to some degree. The following questions are designed to determine in a rough fashion what your goals are. Punch out the letter A through E on your I.B.M. punch card which best describes the importance of the goal named to you.

A. Goal is extremely important to me.
B. Goal is of considerable importance to me.
C. Goal is of average importance to me.
D. Goal is of less than average importance to me.
E. Goal is of little or no importance to me.

goal:

21. The experiencing of thrill or pleasure.
22. Making friends and being socially acceptable.
23. Feeling more confident in your role as a man or woman.
24. Knowing you are able to cope with the problems you are presented with.
25. Accomplishing a great and long sought personal achievement.

PART V

Directions: Something must be gained in risky behaviors otherwise there would be no reason to take the risk. Rate the following behaviors from A to E on your punch card as to how much of the goal named is gained. (continued next page)

A. Behavior is extremely important in realizing goal.
B. Behavior os of considerable importance in realizing goal.
C. Behavior is of average importance in realizing goal.
D. Behavior is of less than average importance in realizing goal.
E. Behavior is of little or no importance in realizing goal.

goal: Accomplishing a great and long sought personal achievement.

26. Smoking of marijuana.
27. Cheating on an exam or paper.
28. Driving or riding in a car at illegally high speeds.
29. Playing of contact sports such as football.
30. Engaging in premarital sexual intercourse.
31. Stealing a large article i.e. worth over $50.
32. Using heroin or cocaine.
33. Drinking an alcoholic beverage until its effects are felt.
34. Smoking half a pack of cigarettes per day (or more).
35. Using pep pills, barbiturates or speed.

goal: The experiencing of thrill or pleasure.

36. Smoking of marijuana.
37. Cheating on an exam or paper.
38. Driving or riding in a car at illegally high speeds.
39. Playing of contact sports such as football.
40. Engaging in premarital sexual intercourse.
41. Stealing a large article i.e. worth over $50.
42. Using heroin or cocaine.
43. Drinking an alcoholic beverage until its effects are felt.
44. Smoking half a pack of cigarettes per day (or more).
45. Using pep pills, barbiturates or speed.

goal: Making friends and being socially acceptable.

46. Smoking of marijuana.
47. Cheating on an exam or paper.
48. Driving or riding in a car at illegally high speeds.
49. Playing of contact sports such as football.
50. Engaging in premarital sexual intercourse.
51. Stealing a large article i.e. worth over $50.
52. Using heroin or cocaine.
53. Drinking an alcoholic beverage until its effects are felt.
54. Smoking half a pack of cigarettes per day (or more).
55. Using pep pills, barbiturates or speed.

goal: Feeling more confident in your role as a man or woman.

56. Smoking of marijuana.
57. Cheating on an exam or paper.
58. Driving or riding in a car at illegally high speeds.
59. Playing of contact sports such as football.
60. Engaging in premarital sexual intercourse.
61. Stealing a large article i.e. worth over $50.
62. Using heroin or cocaine.
63. Drinking an alcoholic beverage until its effects are felt.
64. Smoking half a pack of cigarettes per day (or more).
65. Using pep pills, barbiturates or speed.

A. Behavior is extremely important in realizing goal.
B. Behavior is of considerable importance in realizing goal.
C. Behavior is of average importance in realizing goal.
D. Behavior is of less than average importance in realizing goal.
E. Behavior is of little or no importance in realizing goal.

goal: Knowing you are able to cope with the problems you are presented with.

66. Smoking of marijuana.
67. Cheating on an exam or paper.
68. Driving or riding in a car at illegally high speeds.
69. Playing of contace sports such as football.
70. Engaging in premarital sexual intercourse.
71. Stealing a large article i.e. worth over $50.
72. Using heroin or cocaine.
73. Drinking an alcoholic beverage until its effects are felt.
74. Smoking half a pack of cigarettes per day (or more).
75. Using pep pills, barbiturates or speed.